GAZETTEER OF RURAL DELHI

P.S.D.·30 (English)
2000—1987 (DSK II)

GAZETTEER OF RURAL DELHI

Edited by

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CONTENTS

FOREWORD

Rural Delhi, though shrinking day by day, under the pressure of urbanisation, still holds an important place in the metropolitan complex. The Gazetteer of Rural Delhi is an attempt to describe, analyse and preserve this rural aspect of the life of metropolis.

The idea of writing a Gazetteer of Rural Delhi was first mooted in 1976. In that year a Gazetteer of Delhi was published the third time—the first and second time it was published in 1884 and 1912 respectively. This useful volume was, however, found wanting in proper coverage of rural aspect. It was, therefore, decided to publish a Gazetteer, wholly devoted to the rural aspect of Delhi, for presenting a comprehensive picture of rural life style.

I earnestly hope that this study will prove useful to people interested in rural life and rural uplift. It reveals newly emerging economic and social trends of far reaching consequence and these may be taken note of by economic 'planners and social workers. I very much wish that this effort of Delhi Administration inspires similar studies in other metropolitan areas of the country.

For the successful completion of this project I am grateful to the authors of the chapters and to the members of the Advisory Committee and the Editorial Committee for the Gazetteer of Rural Delhi. Dr. U.P. Thapliyal has indeed done a thorough work as the Editor of the volume.

PREM SINGH
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of Rural Delhi.

Dated : 27th May 1987

PREFACE

The project 'Gazetteer of Rural Delhi' was mooted in 1976 with a view to a better appreciation of the life and condition of the people inhabiting the rural areas of Delhi. It could not, however, be completed within reasonable time because many authors of the chapters could not adhere to the time schedule. The much awaited Gazetteer is now ready and I am glad to introduce it to the people of Delhi.

The Gazetteer comprises seventeen chapters covering various aspects of the life of rural Delhi. These have been contributed by well informed persons and scholars. Some of these chapters however, needed abridgement, rewriting or updating to make them meaningful for Gazetteer purpose. Some chapters lacking in rural orientation were revised. The Editor has, as far as possible, retained the relevant material furnished by the contributors.

The Chapters were sent to concerned Departments of Delhi Administration for perusal and comments. The edited copy of the chapters was also sent to contributors for updating and revision. The additional material supplied by the Departments and the authors was subsequently incorporated in the chapters.

An introductory chapter 'Delhi—A Brief Survey' by Dr. U.P. Thapliyal and a concluding chapter highlighting the economic trends and future prospects by Prof. Desai have been added to the volume. This would indeed enhance the value of the book.

For the successful completion of this work I am grateful to Shri Prem Singhji, Executive Councillor (Dev) and Chairman, Advisory Committee for the Gazetteer of Rural Delhi for the keen interest he has shown in the project. My thanks are also due to members of the Advisory Committee and the Editorial Committee for their kind guidance and help. I would also like to put on record my appreciation for the Delhi Gazetteer Unit in general and for Dr. Mahesh Narain in particular for giving invaluable help to the Editor in completing this work.

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ABBREVIATIONS

A.P.M.C.	Agricultural Produce Market Committee.
C.A.S.A.	Church's Auxiliary For Social Action
C.B.S.E.	Central Board of Secondary Education
D.A.M.B.	Delhi Agricultural Marketing Board
D.D.A.	Delhi Development Authority
D.F.C.	Delhi Financial Corporation
D.M.S.	Delhi Milk Scheme
D.S.I.D.C.	Delhi State Industrial Development Corporation
I.A.D.P.	Intensive Agriculture District Programme
I.C.D.S.	Integrated Child Development Service
I.I.T.	Indian Institute of Technology
I.R.D.P.	Integrated Rural Development Programme
I.S.B.	Industry Services & Business
I.T.I.	Industrial Training Institute
M.C.D.	Municipal Corporation of Delhi
M.F.A.L.D.A.	Marginal Farmers & Agricultural Labours Development Agency
M C H.C.	Maternity & Child Health Centre
N.C.E.R.T.	National Council of Educational Research and Training.
N.D.M.C.	New Delhi Municipal Committee
N.R.E.P.	National Rural Employment Programme
N.S.S.	National Sample Surveys
P.H.C.	Primary Health Centre
P.P.W.	Perspective Planning Wing
R.A.C.	Rural Areas Committee
R.D.C.	Rural Development Corporation
R.L.E.G.P.	Rural Landless Employment Guarantee Programme
S.F.D.A.	Small Farmers Development Agency
T.R.Y.S.E.M.	Training of Rural Youth for Self Employment
U.N.I.C.E.F.	United Nations International Children Emergency Fund
U.P.	Uttar Pradesh

Introduction : Delhi—A Brief History

The earliest references to lands forming part of today's Delhi are found in the Mahabharata. The great epic records that during the reign of Dhritarastra, the blind Kaurava king, a settlement on the banks of the Yamuna, known as Khandavavana or Khandavaprastha had turned into a forest. When it came to sharing the patrimony, the old king gave this piece of worthless land to his nephews, the Pandava brothers, who founded on it a great metropolis, called Indraprastha. The land occupied by Indraprastha and its environs has been identified as the area between the present day Firoz Shah Kotla and Humayun's Tomb.

Indraprastha, which dates back to one millenium B.C., was said to match the splendour of Amaravati, the capital seat of Indira, the lord of gods. According to Puranic traditions Indraprastha enjoyed a pre-eminent position for a good many centuries under the Pandavas and their successors, the Visravas and the Gautamas. But another tradition holds that the Pandavas deserted Indraprastha after only 36 years of rule and shifted their capital to Hastinapur, the seat of Kuru dynasty. In any case, Indraprastha appears to have passed into oblivion after the Pandavas deserted it.

By the 4th Century B.C. ancient Indraprastha seems to have been forgotten. The classical writers who accompanied Alexander during his Indian campaign make no mention of it. Centuries rolled by without history taking any note of the region where the turbulent story of Delhi was to unfold. The Chinese pilgrims Fa-hien and Hiuen-Tsang, came to India in the 4th and 7th century A.D. respectively but, diligent writers though they were, they found nothing worthy of mention in the region.

It is only in the eighth century A.D. that we come across a reliable tradition which speaks of the founding of Dhilika by Tomar Rajput kings, to the south-west of ancient Indraprastha. It is from Dhilika that Delhi is believed to have derived its name. There are some other traditions too. According to Farishta, a medieval historian, Delhi was named after a king, Dilu or Dhilu by name, who ruled over this area around the beginning of the Christian era. The name may as well have been derived from Daidala, a town located between Thanesar and Mathura, by geographer Ptolemy. But the Dhilika theory is more convincing.

Founded in 736 A.D. as the capital of Tomar kings, Dhilika was surrounded by a strong fort called Lal Kot. The remains of the fort can still be seen in the vicinity of Qutab Minar. With the downfall of the Tomars, Dhilika became the capital of the Chahmanas or Chauhans in 12th century A.D. Prithviraj Chauhan improved the defences of the city by expanding Lal Kot which now assumed the name, Qila Rai

Pithora. In 1192 A.D. Dhilika fell to the sword of Qutub-ud-din, the slave general of Muhammad Ghori. To commemorate his victory he buit a grand mosque and a victory tower there. The temples in the vicinity provided ready raw material for these constructions.

Iltutmish (1211-1236 A.D.), the successor of Qutub-ud-din (1206-1210 A.D.) built a new capital to the south-east of Lal Kot. But Muiz-ud-din (1287-1290 A.D.) a grandson of Balban (1266-1287 A.D.) chose Kilokari on the Yamuna for his capital. Jalaluddin Khilji (1290-1296 A.D.) shifted back to the old capital but his successor Ala-ud-din (1296-1316 A.D.) built a new capital at Siri to the north-east of Qutub.

Ghiyas-ud-din Tughlaq (1320-1325 A.D.) who succeeded the Khilji dynasty built a new capital at Tughlaqabad, five miles to the east of the old capital. His successor Muhammad Tughlaq tried to shift the capital to Devgiri but had to return to Delhi after subjecting the people to great deal of suffering and financial loss. Firuz Tughlaq (1351-1388 A.D.) who succeeded Muhammad deserted the old city and founded a new capital at Firozabad, eight miles to the north of Qutub Minar.

Delhi then passed on to the Sayyads and later to the Lodis. Sikander Lodi (1489-1517 A.D.), however, shifted his capital to Sikandarabad near Agra. Humayun (1530-1540 & 1555-1556 A.D.) restored its glory by setting the capital at Din-i-Panah now known as Purana Qila. Sher Shah Suri (1539-1545 A.D.) further beautified this capital.

Delhi did not occupy an important place in Akbar's (1556-1605 A.D.) scheme of things. During his reign, Delhi as we know it today, formed part of the *subah* of Delhi, comprising eight *sarkars* sub-divided into 232 *parganas*. He chose Fatehpur Sikri, near Agra, for his capital. Akbar's grandson Shahjahan (1628-1657 A.D.) built a new capital in Delhi known as Shahjahanabad. But in the process of building this new capital much of the old Firozabad and Din-i-Panah was destroyed. The latter however, continued for another one hundred years as the old city of the times.

Delhi fell on evil days after the death of Aurangzeb (1657-1707 A.D.). Court intrigues and factional fights converted the streets of Shahjahanabad into battle grounds. The sack of Delhi by Nadir Shah in 1739 A.D. brought untold misery to the people. Fishing in the troubled waters, the Jats, the Rohillas and the Marathas plundered Delhi from time to time. Ahmad Shah Abdali looted Delhi in 1737 A.D. In the great struggle for power among the Marathas, the Rohillas and Abdali, Delhi suffered immensely. Gujar, Jat and Sikh forces also contributed to this anarchy substantially. The sorry state of affairs ended in 1803 A.D. when British forces defeated the Marathas in the battle of Patparganj.

This was the beginning of British rule in Delhi. The emperor shorn of all powers and possessions had already been reduced to a cypher. The Delhi of the great

Mughals was a ruined city. A city of two million people during the reign of Aurangzeb, it had a population of half a million in 1739 and one-tenth of a million in the early 19th century when the British stepped in. Delhi recovered to some extent during the following decades but the revolt of 1857 again brought untold misery to the people.

The British ruled India from Calcutta till 1912. But Delhi, the seat of the grand Mughals, always capivated their hearts. In 1877 Delhi was chosen as the site for the great *darbar* to celebrate the assumption of the title *Kaisar-i-Hind* (Empress of India) by Queen Victoria. In 1903 Lord Curzon held second *darbar* in Delhi on a far more lavish scale. Another *darbar* followed in 1911 with King George V present in person. The change of capital from Calcutta to Delhi was announced by the King in this *darbar*. Delhi thus became the capital of India once again.

But the transfer of the capital was not an unmixed blessing for rural Delhi. While it brought welcome employment opportunities and a ready market for village products, it also initiated a process of disintegration of rural way of life. To begin with, six villages in and around Raisina were taken over for building the new capital. By 1913, 25 villages had been acquired for urban use. The number had reached 137 by 1981.

The sprawling metropolis has also greatly influenced the population pattern of Delhi. In 1901 rural areas contributed 48.6 per cent of the total population of Delhi; in 1971 the figure had dwindled down to 10.3 per cent. The urban population increased eighteen fold from 2,08,575 in 1901 to 36,023 in 1971 whereas the rural population increased little more than two fold from 1,97,244 in 1901 to 4,18,675 in 1971. The urban-rural population ratio has further widened over the past decade.

Even more striking is the change in the character of rural population. In fact, there is very little of rural left in the villages of Delhi. A sizeable percentage of people make a living not by farming, dairying or pursuing traditional village crafts but as labourers or menial workers in the city or as factory labour. The trend is encouraged by the policy of the Government to remove non-conforming industries to areas away from the city centres and to develop industrial townships in the rural periphery of Delhi. The emphasis on the growth of cottage industries in the villages has imparted a new dimension to the village life. Of late, there has been a tendency among small entrepreneurs of the city to shift to rural environs, which offer the advantages of cheap land, a sizeable labour force and government concessions.

The new trend has been steadily undermining the homogenous character of the village society. Traditional affinities and relationships do not count for much. Even the family institution is no longer the steadying force that it was. The village is no more a self-contained, self-sufficient entity. Many village products bear no relation to the needs of the villagers but cater to urban needs. Hence, the increasing dominance

of cash crops in agriculture. Industry and economic opportunity has brought affluence to some but has further widened the gap between the rich and the poor. The quality of life shows hardly any improvement.

In the fast changing socio-economic pattern of life the survival of rural Delhi even in its present form is well nigh impossible. The relentless process of urbanisation is bound to sweep everything before it. The Delhi villager will have to learn to adjust to a new order which is rapidly emerging in rural India in general and rural Delhi in particular. But he must do so only in the backwaters of the rising tide of a veritable metropolitan sea. This adjustment of rural Delhi could be extremely painful if adequate care is not taken to ameliorate the adverse consequences that a sprawling metropolis is bound to have on its periphery. Its tendency to throw up its garbage all around its rims has to be effectively countered.

There is a tough challenge here for the economic planners too: how to introduce new economic inputs into village life without destroying the social fabric. The challenge can be met adequately only when it is realized that the planner's commitment is not only to economic betterment but to creating an environment which will be conducive to the growth of the total man, whose cultural and spiritual needs are as important as the bread he must eat. Herein lies the importance of the mass of information this gazetteer provides on the development in the rural part of the Union Territory.

DR. U.P. THAPLIYAL
Editor

CHAPTER-I

NATURAL SETTING

Delhi, unlike the rest of the country, does not live in its villages. This is largely due to the tremendous growth and expansion of the capital city which impinges on the rural areas of the Union Territory. The villages, however, are not fading. Losing rural character they are surfacing as urbanised villages.

According to the 1971 census, there were 258 villages in Delhi, of which 15 were uninhabited. (see appx. A). In the preceding decade 40 villages were urbanised on the establishment of resettlement colonies in agricultural areas and inclusion of some villages in urban limits as per the Delhi Master Plan. This left 200 villages in rural Delhi. As planned by Delhi Development Authority (DDA), the rural areas measured only 1030 sq kms. in 1981.

Location and Topography

The villages of Delhi are located within a narrow strip of the Indo-Gangetic plain, lying between 28°25′ and 28°53′ north latitude and 76°50′ and 77°22′ east longitude. The Yamuna river separates them from the Meerut and Ghaziabad districts of Uttar Pradesh in the east. On other sides, the villages border on Sonepat, Rohtak, Gurgaon and Faridabad districts of Haryana. Situated between the Thar-Aravalli barriers, projecting from the south-west and the Himalayan artliers hanging from the north, the entire region gives the look of a spacious alluvial neck. The ridge, the culminating spur of the Mewat branch of the Aravalli hills, enters from the south and moves to north-westerly direction. The main branch of the ridge goes north-east upto Arangpur and then takes a turn to north-west until it rejoins in a sweeping curve the main ridge. There are also some small branches which add to the variety and complexity of the topography. The tail end of the last spur of the ridge goes southwards upto Mehrauli and then turns towards Badarpur and Tughlakabad along the Delhi-Haryana border. These north-south and south-east ranges form a triangular plain with the river Yamuna in the east. The Najafgarh *jheel*, along Delhi-Haryana border is the largest natural depression. The catchment area of the *jheel* spreads over 906.5 sq. kms. The normal tank-full level of the *jheel* is 960 ft. above sea level. When this level is reached about 7,500 acres of land gets submerged owing to reverse slope in this area and the limited discharge capacity of its outlet the Najafgarh Drain, vast areas around the *jheel* get water-logged after heavy rains.

The river Yamuna enters the Union Territory over a km. north of palla village, at an altitude of 690 ft. above sea level, and leaves it near Jaitpur below Okhla at an

altitude of 650 ft. above sea level. Its course within Delhi territory measures roughly 51 km. with a fall of 18 to 20 inches per 1.6 km. During the rainy season, the river widens considerably. The maximum depth in this season is about 25 ft. and the discharge at Okhla is above 4,100 cusecs. In the summers the river narrows down, the maximum depth being then about 4 ft. and the discharge less than 200 cusecs. When flooded, Yamuna threatens wide areas in the north-west and the east. The banks of the river have been strengthened by bunds and embankments.

The Hindon river, flowing 11 to 13 km. east of Yamuna skirting Shahdara, is very winding, has no definite banks and subjects large areas to flooding. The river has been dammed just south of the Delhi-Gaziabad railway line and a diversion canal-Hindon meets Yamuna above the Okhla weir. It also marks the boundary with U.P. across Okhla. The main Hindon river joins Yamuna south-east of Tughlakabad and east of the Old Faridabad town. Here the meandering belt of Hindon merges with the swampy and marshy tracts of Yamuna. The area has always been devoid of any settlement.

The old Yamuna flood plain comprises an area of about 161 sq. km. and extends upto a maximum of 14 km. from the river in the extreme north. The new flood plain has been formed of recent alluvium in the river bed. It comprises an area of 549 square miles, with a maximum width of 8 km. The area is very fertile but is always subject to floods.

Physiography

Physiographically the Union Territory is marked by 5 major terrain components, namely rocky relief, bad land, gently undulating surface, flood plain of Najafgarh link drainage system and flood plain of Yamuna river.

Rocky Relief

The rocky stretch runs through the central part of the territory in a north east-south west direction from Wazirabad to Mahipalpur and then branches out in two parts, one going south towards Mandi and Harchandpur and the other swinging round in a south easterly direction towards Arangpur. These again spread out to the north towards Tughlakabad and greater Kailash area and to the south towards Bhati area to join up with the Western trunk at Harchandpur. A detached portion of rocky relief is also observed in Anand Parbat and Inderpuri area. This relief, attains its maximum altitude at Bhati (318 m above MSL) in the south and lowest at Wazirabad (208 m above MSL) in the north.

Between Wazirabad and Mahipalpur the relief appears as a narrow elongated rocky body, popularly called the ridge. It has a maximum width of 2.5 km. west of Chanakyapuri and a minimum width of 50–100 meters at Wazirabad. The overall longitudinal slope of the relief from south to north is 0.002 and the average lateral gradient

is 0.035. The rocky exposures which are at almost ground level at Wazirabad rise upto 25 m. at some places.

Broadly speaking the relief has a slightly plano-convex upward to nearly flat upper surface, which in all probability represents a surface of planation. In detail, however, the relief is made up of narrow and small ridges which provide it a rib-like appearance. This may be attributed to preferential weathering and erosion along planes of weakness of softer component of the rock. The rock is highly jointed and it is along these joints that water percolates and removes cementing material. The leaching of the cementing material leaves a zone of loose grains along the outer rim of the jointed block of rock whose core retains its freshness. The loose grains are removed by surfacial agencies resulting in the lowering of super-incumbent weight with consequent development of fresh planes of weakness parallel to the existing joint planes and this keeps the process alive. In a number of sections as observed at Willingdon Crescent, Badarpur and Mandi, colour zonation close to the joint planes are seen and leaching of the binding material, leaving an outer zone of loose to gritting quartz grains or very fine grained iron rich red soil, popularly referred to as the 'morrum' is observed. The joints in the rocky area as they gape open provide passage for joint control streams which on coming out of the rocky area give rise to dendritic pattern with intense dissection leading to the formation of bad land.

Bad Land

Intense gully dissection has resulted in a 1 to 3 km. wide zone of bad land in the immediate vicinity of rocky relief. West of the relief, this zone stretches from Anand Parbat to Harchandpur through War Cemetry area, Dhaula Kuan and Mahipalpur. East of the relief, bad land is met west of Willingdon Crescent, I.I.T. and Hauz Khas. South of Masudpur and Mehrauli, the bad land stretches out in a crescent form through Yahya Nagar, Mandi, Garhi, Fatehpur and Dadranwala. South of Mahipalpur, the bad land zone stretches along the western edge of the relief through Rangoura, Wazirabad on to Harchandpur. The bad land is characterised by fine textured drainage of dendritic pattern. The gullies start within the relief area and are sub-rectangular to sub-parallel as they are joint controlled, but as soon as they come out on to the soil part they have deep vertical cuttings with gully wall being near vertical and at places nearly 16 metres high from the gully bed. The inter-gully areas are surrounded and subjected to both rill and sheet erosion. Moreover in the headward part of the gullies, there are curviplanar cracks in the soil which seem to aid gravity fall of the material as action of water in the gully at times of flow in these ephemeral streams tend to remove the binding material of the soil. This process of erosion has given rise to amphitheatre like depressions in the headward part of the gullies and continuation of the same process seems to precipitate the development of shallow, near circular, depressions which when containing water area referred to as '*Johars*'. This entire zone is an area of intense erosion.

The master stream of each dendritic set on coming out of the zone of bad land flows over a very gently undulating surface which forms an outstanding feature of the physiography of the area. This surface, which is separated by reverine stretch of about 3m. from the Yamuna flood plain, as observed at Wazirabad Barrage or east of Badarpur and Ghosapur, has a centripetal drainage system in its western and south-western part. The components of this drainage system are the Mungeshpur and Nangloi drains which flow in from the north; Sahibi from the West and south and Palam drain from the east fall into a shallow depression known as the Sahibi-Najafgarh link. The deepest part of this depression is called the Najafgarh Jheel. Besides the Jheel a 7 feet deep depression exists west of Mundela Khurd. The only escape for the water from these depressions is the Najafgarh Drain which flows out from the area in a north easterly direction to join river Yamuna at Wazirabad. The Sahibi river which has its catchment area in Rajasthan, flows in from that State through Haryana and enters Delhi at Dhansa. From Dhansa the course of the river is canalised and linked with the Najafgarh Drain. The course of link channel may be broadly divided into two stretches, one between Jhatikra and Kakraula and the other between Kakraula and Wazirabad. In the first stretch, having a higher sinuosity, there is adjustment of the hydraulic channel over a gradient which is lower than the second stretch. The water surface gradient in the first stretch is 0.0324 as compared to 0.0833 in the second thus showing that the second stretch is 2.6 times steeper than the first.

Between the two stretches the longitudinal profile of the channel is upwardly planoconvex. This is a deviation from the normal and may be attributed to canalisation. Corresponding to this anomaly is the anomalous increase of velocity in the second stretch by 1.6 times and narrowing of the channel width by 1.5 times in the downstream direction. The link channel had a capacity of 900 cusecs in 1966 and this was subsequently increased to 3,000 cusecs for better drainage. However, at times of flooding even this has been found inadequate and there is a proposal for raising its capacity to 6,000 cusecs. However, achieving this by widening the course is difficult as the drain is thickly settled on both sides. The deepening of the course is impractical because that will reduce the bed level of the drain below the Yamuna level. Studies reveal that during bank-full discharge, the water covers all area below 690' contour level. This in turn suggests that the area covered by the water in the Najafgarh *jheel* is wide and shallow with maximum depth at 684' contour interval. These data are useful for preparing a rational flood control programme in this area.

Flood Plain of Yamuna

River Yamuna forms the most important perennial drainage of the Territory. It forms one of the most geomorphological unit. This unit is characterised by the presence of:

(a) Existing river channel,
(b) Palaceo-channel courses,
(c) Meander scrolls,
(d) Recent point bars,
(e) Recent channel bars,
(f) Fossil point bars,
(g) Fossil channel bars,
(*i*) Crevasse splay, and
(i) Slough.

The flood plain of Yamuna covers the northern, north eastern and eastern part of the Territory. This unit is separated from the gently undulating surface by a bluff which runs along a curvilinear trace from Narela through Bagargarh, Sanoth, Khera Khurd, Khera Kalan, Alamgirpur to Azadpur and then swings east through Kingsway Camp to Wazirabad. From Wazirabad, the bluff runs south towards Matcalffe house, possibly merging with the embankment on which the Ring Road runs. Between this point and Kalindi, much of the structures of urban Delhi cover up the feature. However, beyond Kalindi this feature trends with irregular edge in a south easterly direction to Ghospur and beyond. This bluff gives the western limit of the Yamuna flood plain. East of the present channel and about 1/2 km. away from it is a north to south trending embankment. The Yamuna at present has a meandering to sinuous course and exhibits oscillation by lateral bank cutting and bar building activities. The mapping of significant plaeocourses suggest that Budhi Nala which flows through Sonepat was once a course of Yamuna and hence the river has been shifting east. The nature of discharge shows that the Yamuna, as a result of canalisation etc., is now a seasonal stream with discharge value as low as 75 cusecs during lean months.

Geology

The geology of the area comprises mainly grey to greyish brown quartzites usually referred to as the Delhi quartzite which has been intruded by pegmatites and overlain by unconsolidated quaternary sediments.

Quartzites of the Alwar formation belonging to the Delhi group are exposed in the north, north central, central and southern part of the Territory. The northern most tip of the rock exposure is at Wazirabad. The rock here is reddish brown to bluish grey in colour and massive in look. Overall bedding surface is seen trending NNE-SSW and dipping east at about 40° to 65° as observed in the vicinity of Balakram Hospital. This rock exposure shows slight widening towards south and is widest at its southern most tip near Boulevard Road north of Motia Bagh Railway Colony. South of it, the rock is exposed at the railway crossing but further south in the Sadar Bazar area, it is all covered up. Aerial photographs reveal that bedding trend is deflected slightly more to the east relative to the exposure to the north and the strike trend is

NNE-SSW to N 35°S 35°W. This fact suggests a somewhat S-shaped drag with subsequent development of ENE-WSW trending shear plane. Perhaps this explains the gap between the two exposures but a check is difficult as the area is completely built up. The concept of the shear plane is postulated here because similar planes are observed in rocks in other parts of the area and as the quartzite has high competency, its response to folding of small wavelengths and drags is by rapturing when the strain exceeds a critical limit. South of Sadar Bazar and in the vicinity of Idgah, the rock is exposed and bedding shows same trends with a dip of about 50°60° towards east. While this trend of bedding continues further south uptó the south western edge of Vasant Vihar through Karol Bagh, Old Rajinder Nagar and Dhaula Kuan, a part branches out towards Inderpuri through Dashghera trending in a south westerly direction leading ultimately to the rock exposures at Inderpuri. From this point of bifurcation, another part branches out towards Anand Parbat trending WNW and ultimately merging with the rock exposures at Anand Parbat. This mode of branching out is correlated with the mushroom nature of folding that has developed in this part with the two limbs being constringed to the maximum in the vicinity of Inderpuri. The tracing of bedform on aerial photograph indicated dragging with the subsequent development of fault planes trending approximately NNE-SSW. The dragging along the westernmost fault is towards north and along the eastern one, although not very clearly, towards south. At Anand Parbat the rocks are folded into a synform with its closure to the north and a general plunge towards the south. Although much of this area is covered up, aerial photo studies with limited field checks reveal that the western limb have been dragged into Z-shaped folds with dip towards west while the eastern limb shows S-shaped drags dipping towards east. The axial trace of the fold trends NNE-SSW. Near the hinge area, the plunge is towards soutn, west of the axial trace and north to the east of it. Hence the axial trace is interpolated as coinciding with the surface projection of a rotational fault.

South of Moradabad Pahari and Vasant Vihar the bedding on the western limb of the regional fold continue in a SSW direction with a slight Z-shaped drag, while the beds on the eastern area run through Mahipalpur, Masudpur and Mehrauli. Through this stretch, the bedding shows development of tight asymetrical folds. The adjustment to the conditions of strain development in the highly competant quartzite during these folding events, has taken place by shearing. A number of NNE-SSW and N-S trending shear and fault place traces are observed in the vicinity of Masudpur, Kishangarh and Mehrauli. The restriction of these planes only within these exposures suggests their development subsequent to the folding event. Around Moradabad Pahari, the trend of bedding varied from N 25°-30° E-S 25°30°W and dip 45° to 75° towards east. In the stretch between Mahipalpur, Masudpur and Kishangarh and to the north of these villages the bedding trend varies from N 5° to 25° E-S 5° to 25°W and dips at 45° to 75° towards east to NNE-SSW with 30° to 50° degrees dip towards east. This vallation manifests as tight Z-shaped drag folds on whose limbs about three shear planes

have been observed with trend varying between NNE-SSW and NE-SW. In the stretch between Kishangarh and Lalkot, the bedding trend varies from N 75° E-W 75° W to N 75° W-S 75° W-S 75° E with dip varying between 40° to 70° degrees in southerly direction. This variation in trend corresponds to a northerly closing synform.

South of Lado Sarai the bedding trend changes to NNW-SSW with easterly dips and this is interpreted as due to the presence of a fault existing between this area and Kishangarh-Mehrauli block. This fault plane trends NE-SW. The NNW-SSW trend of bedding in the Lado Sarai block represents the western limb of a southerly plunging antiform which is followed eastward by a complementary synform closing north and plunging south. As the common limb of the two folds is short and the nature of hinge area suggests that the fold is of open type, a fault can be envisaged along this limb trending almost N-S passing along the eastern edge of the rock exposure on which Balban's tomb stands.

The eastern limb of synform trends NW-SE but on moving towards Arangpur to the east, it gradually assumes a nearly east-west trend with dip of about 60°-70° to the south. Moving east from Arangpur again, the strike of bedding trends NE-SW with easterly dip upto Badarpur and the trend becomes NNE-SSW with easterly dips. This suggests the development of an antiform in this stretch and this structural feature is referred to as the Arangpur antiform. North of this area near Adilabad fort, the strike trend is WNW-ESE with dip of 30 degrees towards south and this trend also passes into Tughlaqabad area, thus suggesting that the eastern limb of the Arangpur antiform is made to trend in WNW-ESE direction. However, the changes in the direction of dip due to faulting is not ruled out. N 50°-60° W-S 50° 60° E trending beds of Tughlaqabad area are juxtaposed against southerly plunging fold closure in Govindpuri Harijan Colony area and this is interpreted as due to the presence of a WNE-ESE trending fault. The trend of this fault is well picked up by aerial photographs. In Shamnagar area, the trend of bed is NS to NNE-SSW with dip varying from 60° to 80° towards west while near Govindpuri bus depot, the trend is N50° W-S50°E with dip 35°—45° towards south. This change in trend may be interpreted as due to development of an antiform fold plunging towards south.

South of Rangpuri, the bedding trend is N-S to NNE-SSW with dip varying from 40° to 60° towards east till the vicinity of Yahya Nagar from where the bedding swings in NNW-SSE direction and along the locus of points of deflection of the different beds, a trace of the zone of shearing on fracturing trending ENE-WSW is observed. Further south in the vicinity of Mandi, the bedding again assumes a H-S trend and another shear plane trace is seen trending NE-SW. The bedding continues as such towards south of Mandi, where after a ENE-WSW erosion gap, the rock continues towards Harchandpur to form the nose of a major antiform.

Joints

Throughout the area the rocks are highly jointed and at a single exposure upto 5 sets of joints have been recognised and measured namely;

(1) Strike N 45°E Dip 70°E
(2) Strike N 15°E Dip 90°E
(3) Strike N 50°W Dip 70°E
(4) Strike N 15°W Dip 55°W
(5) Horizontal

Besides these, other sets are also present and at least three sets are observed parallel to the bedding.

Post Delhi Instrusives

The quartzites of the Alwar formation have been intruded by pegmatites and quartz veins along joints and shear planes during a hydrothermal phase in the closing period of the orageny responsible for folding and fracturing as evident by the presence of fractures in the more micaceous part of the quartizite. The pegmatites which comprise felspar, quartz, mica and tourmaline, usually show variation in trend from N-S to N 60°E-S 60°W. Pegmatite dykes are seen all over but they are mainly concentrated in the Mahipalpur-Masudpur and Mandi area.

Quaternary Sediments

In the close vicinity of shear and joint planes, veins of quartz are seen. The unconsolulated sediments of quarternary age have been classified into two broad grounds;

(a) Essentially sandy silt with clay and kankar and
(b) Essentially micaceous fine medium to coarse grained sand with minor silt, clay and kankar.

The first group comprise the badland, gently undulating surface and the Sahibi-Najafgarh link flood Plane component of the terrain and is believed to be essentially aeolian in origin while the second group of sediment comprises the flood plain of the Yamuna river and is alluvial in origin.

Mineral Deposits

Mineral deposits of economic significance in the area are: a) China clay, b) 'Morrum', c) Building stones and d) clay. China clay occurs as a weathering product of pegmatites and is obtained by open quarrying. There are a number of pottery industries which utilise this material. China clay bodies are met in the vicinity of Mahipalpur and Masudpur. The pegmatite also contains some amount of mica and tourmaline but these are not of any economic importance. 'Morrum' is a weathering

product of the quartzite and is used as building material. The main morrum quarries are at Bhati and Badarpur. The quartzite as it provides good building material is also quarried out for the same. Clay deposits in the area are utilised for brick making.

Hydrology

The observations regarding the subsurface conditions of Hydrology are as follows:

(a) The rocky relief, forms a divide with flow away from it in opposite directions and itself a poor source of ground water which occurs only in fractures.

(2) Near the surface ground water occurs under unconfined conditions.

(3) Depth of the water is within a 1-10 metres range below ground level and follows general topography.

(4) The shallow aquifers are those made up of granular zones upto 70 metres depth from the ground level.

(5) Deeper aquifers occur under confined conditions.

(6) The chlorine content indicates that water of potable quality (chlorine content less than 250 p m) occur in restricted areas, while the water usually has high salinity which tends to increase with depth.

(7) River Yamuna and Najafgarh drain are effluent streams.

Seismicity in and around the Territory

The villages of Delhi are situated in a region which is liable to suffer minor damages by earthquakes, originating from its neighbouhood as also from the Himalayan zone far away from it. It is believed that the earthquakes with their origin in the neighbourhood of Delhi are caused by the Moradabad fault, the Sohna fault, the junction of Aravalli and the alluvium hereby The great Himalayan Boundary fault is the seat of some of the strong earthquakes which have the areas of Delhi also within their grip.

The seismic history of the region shows that the maximum intensity so far reached was 8 M.H. scale. However, the maximum intensity was experienced only in areas with unconsolidated foundations, the old buildings having suffered the major brunt of the damage. In the opinion of the seismographers the expected average seismic intensity in Delhi areas for future earthquakes may be taken as between 7 and 8 MM for consolidated foundations. The latter corresponds to ground acceleration range of 51-350 CM/Sec and an average acceleration of 172 CM/Sec in any one direction. This wide range of acceleration is due to the fact that its value at a place depends largely on the nature of the foundation existing at the site. The earthquake danger to buildings erected on consolidated or filled up earth may be 10 times more in comparison to those buildings having their foundation on granite or hard rock, as such, seismic factor to be applied in the design of structures at Delhi and neighbourhood depends by and large on the nature of foundation available. For sites on well-consolidated foundation,

a seismic factor of 10% gravity is adequate, while it may be increased to 15% for weaker foundations.

Earthquakes that shook the areas in and around Delhi are listed in Appendix B.

APPENDIX-A

Block-wise villages, area and population, 1971

Development Blocks	Inhabited villages	Deserted villages	Total	Total area (Hectares)	Population (Census 1971)
1. Alipur	58	3	61	23756	91743
2. Nangloi	53	–	53	25315	112873
3. Najafgarh	69	6	75	30186	113147
4. Mehrauli	30	—	30	16213	66944
5. Shahdara	33	6	39	7355	33968
Total	243	15	258	1,02,825	4,18,675

APPENDIX-B

List of earthquakes experienced in and around Delhi.

S.No.	Date	Estimated Intensity on M.M. Scale at Delhi	Remarks
1	2	3	4
1.	6th July 1505	5	The Agra Delhi area was strongly rocked by a severe earthquake which had its epicentre in Kabul, Afghnisthan.
2.	15th July 1720	8	This earthquake had its origin not far away from Delhi and was responsible for extensive damage to the walls of Delhi Fort and many buildings. It also caused loss in life in old Delhi.
3.	1st Sept. 1803	8	This violent earthquake had its epicentre near Mathura. It caused extensive damage to buildings including Qutab Minar and also led to loss of life. It also caused fissures through which water rose with considerable force near Mathura.

1	2	3	4
4.	16th June 1819	5	The Kutch earthquake which caused ruin of the old architectural city of Ahmedabad and other towns in Gujarat, was also strongly felt at Delhi.
5.	4th April 1905	7	The great Kangra earthquake, caused minor damages in Delhi.
6.	15th Jan. 1934	6	The destructive Nepal Bihar earthquakes also caused slight damage in Delhi.
7.	14th Nov. 1937	5	An earthquake of moderate intensity which had its epicentre near the Hindukush mountains was felt at Delhi.
8.	4th June 1945	5	The earthquake had its epicentre in Kumaun Hills and was of moderate intensity.
9.	4th March 1949	5	The earthquake had its epicentre near Hindukush range.
10.	10th Oct. 1956	5	It was an earthquake of moderate intensity.
11.	28th Oct. 1958	7	An earthquake had its epicentre NE of Almorah.
12.	27th Aug. 1960	7	The epicentre of this earthquake lay between Delhi cantonment and Gurgaon. The intensity in the epicentral tract was about 7 MM whereas in Delhi area it was between 6 and 7 M.M. As a result two people died and about 100 people sustained injuries. 75 of the buildings in the epicentral tract developed cracks. Estimated damages to Govt. buildings in Delhi was about 5 lakhs.
13.	13th July 1962	1	An earthquake of moderate intensity with its epicentre in Almorah was felt strongly in Delhi. It was followed by another shock of 14th July.
14.	29th Sept. 1962	4	The Earthquake had its epicentre near Palam.
15.	28th May 1964	4	An earthquake of medium intensity with epicentre close to Delhi was felt strongly by the residents of Delhi

1	2	3	4	
16.	27th June, 1966	6	A moderate shock with its epicentre in Nepal was felt in Delhi. Some buildings in South Delhi developed cracks.	
17.	15th August, 1966	3	A moderate shock with its epicentre near Moradabad was felt in Delhi.	
18.	25th July, 1967	28.79 N, 77.75 E Mag	2.5	Felt at Delhi.
19.	21st Nov., 1969	29.0 N, 77.5 E	3.1	-do-
20.	21st Dec., 1969	28.6 N, 77.2 E	2.6	-do-
21.	22nd Jan, 1970	28.8 N, 77.3 E	2.5	-do-
22.	18th Mar, 1970	29.1 N, 76.6 E	3.8	-do-
23.	8th July, 1970	28.9 N, 77.5E	3.0	-do-
24.	12th Dec. 1970	70 Kms from Delhi.	2.8	———
25.	13th Mar., 1971	87 Kms. from Delhi	2.8	———
26.	22nd Feb., 1972	85 Kms. SW from Delhi	3.2	———
27.	21st July, 1972	40 Kms. from Delhi. Close to Sonepat.	..	———
28.	11th Dec., 1972	65 Kms. NW of Delhi	...	Felt at Rohtak.
29.	18th Dec., 1972	65 Kms. WNW of Delhi	...	-do-
30.	16th Jan., 1973	55 Kms. NNW of Delhi	...	-do-
31.	30th Jan., 1973	75 Kms. NW of Delhi	...	-do-
32.	16th July, 1973	30 Kms. from Delhi	2.8	Felt at Delhi.
33.	28th Sept., 1973	100 Kms. NE of Delhi	3.5	-do-
34.	20th Feb., 1974	28.2 N, 76.5	4.1	-do-
35.	10th Jan., 1975	32.5 N, 78.4E	6.2	47 persons killed. in Himachal Pradesh. Felt at N. Delhi.
36.	22nd Jan., 1975	31.9 N, 78.5 E	4.7	Felt at Jaipur and Delhi.
37.	13th May, 1975	28.8 N, 76.7	3.9	Felt at Sonepat.
38.	8th July, 1975	21.2 N, 94.9 E (Burma)	6.7	Felt at 4th & 5th floors of multi-storeyed buildings in Delhi.

1	2	3	4	
39.	6th Nov., 1975	29.8, 78.0 E	4.7	Felt at Roorkee Dehra Dun, Delhi and other places.
40.	Ist Feb., 1978	WNN of Delhi 60 Kms. away.	1.9	Felt locally.
41.	4th May, 1978	70 Kms. WNW of Delhi obsy	1.6	Felt at Rohtak.
42.	15th March, 1978	13 Kms. away from Delhi.	3.4	Felt at Delhi.
43.	16th Oct., 1978	25 Kms. SW of Delhi	2.1	-do-
44.	17th March, 1978	16 Kms. away from Delhi.	1.7	-do

FLORA

Introduction: Geographically situated amidst the Thar Desert of Rajasthan, the Indo-Gangetic Plain and the Aravallis, the Union Territory of Delhi is characterised by semi-arid climate with extreme summer, severe winter and a moderate rainfall. Consequently, the vegetation of the Union Territory is semi-arid, open, scrub forest type commonly referred as 'rakhs' or broadly classified under tropical, thorny, secondary forest. The physiognomical aspects of such a vegetational type are the presence of open canopy, absence of distinct storeys, abundance of low, stunted, spinescent shrubs, gregariousness of plant species, nakedness of the ground (except in monsoonic months) and total absence of woody climbers and epiphytes.

This is the view one encounters on coming out of the Indira Gandhi International Airport Terminus at Palam. But as one drives into the urbanised sector, a conglomeration of exotic and indigenous trees and shrubs planted along roadsides, and in parks and gardens welcome him.

The Union Territory spreads over an area of 1,484 sq. km of which 1,157 sq. km (78%) is covered by rural Delhi. The rural zone comprises 258 villages, and is bordered by Meerut and Ghaziabad districts of Uttar Pradesh on the north-east and east respectively and by Sonepat, Rohtak, Gurgaon and Faridabad districts of Haryana on other sides. The landscape of rural Delhi is at once distinguished from the urban sector by the endless open fields interspersed with villages having semi-circular or oval contour. Villages are relatively small in size with narrow, dustladen roads, and are located on elevated tablelands. Practically there is no green cover except in abandoned places, religious sites and outskirts fringing the crop fields.

Topography : From the point of view of vegetational analysis, it is essential to describe the topographical zones because plants generally form discrete communities

corresponding to different physiographic belts. The rural tracts of Delhi can be conveniently divided into four well-known topographical zones: (i) *khadar* (riverain zone), (ii) *bangar* (area irrigated by wells and canals), (iii) *dabar* (low-lying and rain-fed area) and (iv) *kohi* or *pahari* (hillsides).

The *khadar* is a low lying stretch of land adjoining river Yamuna. It comprises Alipur-Palla on the north, trans-Yamuna villages on the east, tracts west of ring road and Okhla, and areas adjoining the hilly tracts of the south. The river Yamuna enters the State at an elevation of 216m and leaves it at 192m above sea level, and has wide, sandy beds flanked by high banks. There are also riverain islands, particularly at Wazirabad and Okhla where water is dammed up. The area is prone to floods and the soil texture varies from coarse sand to clay with pH on the alkaline side. Although only 38% of the total riverain tract is under cultivation, open nearly barren, whitened or half-whitened patches caused by saline efforescence known as *usar*, *reh*, or *kellar* are not uncommon. Further, there are depressions which are waterlogged during the greater part of the year. The area is irrigated by tube-wells

The *bangar* is the stretch of land to the north-west of Yamuna and comprises Narela-Bawana and Nangloi tracts. Within this zone, there are uninhabited elevated rocky tablelands and several marshy depressions (*jhils*). The soils are more fertile and productive than those of *khadar*, and are of silty sand or loam with pH around neutral except in some places. The whitened or half-whitened patches are more common than in *khadar* zone. The area is irrigated by the western Yamuna canal as well as by tube-wells.

The *dabar* covers the south western and western tracts adjoining the hilly zone of the south. It includes Najafgarh-Ghalipur and Kakrola areas adjacent to Palam village. There is a depression near the Najafgarh township where water from the western side of the ridge accumulates during rainy season. Being low-lying, the greater part of *dabar* is flooded during the monsoon. The entire area is, however, cultivated as the water drains into adjacent Najafgarh drain during dry weather.

The *kohi* or *pahari* covers the hilly tracts in the south, and includes the ridge which is an extension of the Aravallis. The Aravallis enters Delhi from Gurgaon and expands into a rocky tableland of about 5 km breadth, and then extend to Yamuna in north-easterly direction. The ridge has a number of flanking spurs, besides the main forks. The dry channels, the gulleys and ravines sculptured by soil erosion, the residual hills, the boulders scattered over gulleyed peneplains and the undulating dales and vales make the ridge an abode of diverse ecological niches with their characteristic plant life. This is particularly evident from the picturesque landscape on the back of Qutab at Mehrauli village.

The forests spreading over 1,100 hectares constitute only 1% of the total geographical area. The characteristic feature of land tenure is the reservation of wood pro-

ducing land in the *shamlat deh* (common land) as an enclosure from where no fuel or wood is to be used. These are also known as sacred grooves.

Vegetational Analysis: Although the vegetation of rural Delhi can be analysed in terms of four topographical zones, within each zone the habitat, particularly the edaphic factor, is so diverse that it is more convenient to analyse it on the basis of the floristic composition of each habitat.

Flora of Hilly Tract

These habitats are located in the south-western, southern and south-eastern tracts. The vegetation is xerophytic with less varied plant communities having a fewer species. The flora is represented by members belonging to some 40 families, with 1:1.6 as the ratio of genera to species. The climax formation (dry deciduous forest) has been replaced by secondary formation (scrubjungle), except for small pockets in the protected shallow ravine slopes of hillocks. The dry deciduous forest is characterised by *Anogeissus pendula* (siras)-*Acacia senegal* association with *Butea monosperma* (palas, kesu) as a codominant. The predominant families in these forests are Leguminosae, Malvaceae, Asclepiadaceae, Capparaceae and Euphorbiaceae. The characteristic tree species are *Acacia leucophloea* (ronj, jand), *A. modesta* (phulahi) and *Prosopis spicigera* (janti; chonkra), besides the naturalized *Prosopis juliflora* (kabuli kikar)—an evergreen, spiny, medium-sized tree of the arid regions of Mexico and Central America. The second storey is composed of low trees, of which the most predominant ones are *Dichrostachys cinerea* and *Zizyphus mauritiana* (ber). In most places this storey is absent. The shrubby component is well-represented and has highest density. Its members are *Adhatoda vasica* (bansa, arusa, piabansa, bekad, basuti), *Capparis decidua* (karel, kair, karir, dela), *C. sepiaria* (heeus), *Carissa spinosa* (kikraunda, jangli karaunda), *Grewia tenax* (chabeni, ramchana, khatola, gondni), *Lycium europaeum* (chirchitta, khatai, chirmethi), *Maytenus senegalensis* (kakera), *Securinega leucopyrus* and *Zizyphus nummularia* (kokanber, badber, jhad, beri).

During monsoon months green carpet emerges out. The herbaceous plants of this green cover include both grasses and herbs belonging to the families Amaranthaceae, Tiliaceae, Capparaceae, Leguminosae, Compositae, Convolvulaceae, Pedaliaceae and Acanthaceae. The conspicuous elements of the ephemeral vegetation are *Cleome viscosa* (hulhul), *Commelina benghalensis* (kanieri, kana), *C. forskali* (kankawwa, kana), *Corchorus aestuans* (chonch), *Justicia simplex* (onga), *Peristrophe bicalyculata* (missi), *Phyllanthus fraternus* (mokh, nunki), *Trimfetta rhomboidea* (kansi) and *Vernonia cinerea*. The grasses are represented by *Aristida adscensionis* (lamp), *Brachiaria ramosa* (makraghas), *Dactyloctenium aegyptium* (makra), *Digitaria adscendens*, *Eleusine verticillata* (makra), *Eragrostis poaeoides* and *Setaria verticillata* (laptuna).

In addition to the ephemerals which are mostly annuals and reproduce by seeds, there are several other herbaceous plants which perennate by underground rootstocks

or stems, but produce aerial shoots during rainy season and remain green for a prolonged period during dry season. The most noteworthy among them are *Achyranthes aspera* (puthkunda, lapa, chirchitta, balvala, monga), *Boerhavia diffusa* (santhi, santh, bis-khafra), *Cenchrus ciliaris, C. setigerus* (anjan, kala anjan), *Cyperus rotundus* (motha), *Dichanthium annulatum* (zarga, barlu, apang), *Heteropogon contortus, Oropetium thomaeum, Pupalia lappacea* (jhojhru, din ka tara, bhurat, chirchitta), *Sporobolus diander* (doob) and *Tribulus terrestris* (bhankdi, gokhru).

The climbers are represented by both annual and perennial species, and belong to the families namely Convolvulaceae, Asclepiadaceae, Cucurbitaceae and Leguminosae. The most conspicuous perennial ones are *Cissampelos pareira* (patat ki bel, nirbsi, jailjamini), *coccinia grandis* (kundru, kanduri, kutru, ramkachriya), *Cocculus hirsutus* (khareta ke bel, chiretta), *Maerua arenaria, Pentatropis spiralis, Pergularia daemia* (aaksan), *Rhynchosia minima,* and *Telosma pallida*. The annual climbers are represented by *Ipomoea pilosa* and *I. pentaphylla* which produce showy, trumpet-shaped bluish flowers.

With the onset of winter the ground is nearly barren, except for the emergence of *Gnaphalium purpureum* (buchubcha), *Launaea fallax* (gobi), *Poa annua, Polypogon monospeliensis, Potentilla supina* (dodi), *Rumex dentatus* (lalbibi, jangali chorai, jangli palak, khat palak), *Sisymbrium irio,* chick weeds (*Spergula fallax* and *Stellaria media*), and scapigerous, bulbous herb like *Urginea indica* (jangli piyaz). Most of these winter plants are confined to moist and shady places, particulary in depressions. Plants such as *Blumea mollis, Carthamus oxyacantha* (kateri, kateli, pohli, kasumbhi), *Echinops echinatus* (oontkatela), *Erigeron bonariensis* (phulni), *Laggera aurita, Pulchea lanceolata* (rukhri, baisurai) and *Volutarella ramosa* (rissa) start their life cycles with the onset of monsoon, produce flowers and fruits towards the end of winter and complete their life cycle by the end of summer.

One of the interesting aspects of vegetation in the Union Territory is that where-ever there is a biotic interference, the native herbaceous and shrubby species give way to the most notorious, obnoxious weedy taxa of tropical American origin. Some of them are *Bidens biternata* (chirchitta, suka ped), *Croton bonplandianum* (kala bhangra), *Erigeron bonariensis* (phulni), *Lantana camara, Malvastrum commandelianum* (kharenti), *Martynia annua* and *Parthenium hysterophorums* (congress grass). The density of these aliens in a given area may be taken as an index of biotic disturbance. The high survival value of *Prosopis juliflora* in all types of ecological niches keeps the native flora in the background in some localities, and eliminates it elsewhere.

The hilly tracts adjacent to Suraj Kund support the relicts of once dominant in the vegetation. These relict species are *Anogeissus pendula, Balanites roxburghii* and *Butea monosperma*. Both *Anogeissus pendula* and *Butea monosperma* have become crooked, straggling bushy shrubs because of heavy lopping of branches for fodder by local people.

Plants of Saline/Alkaline Tracts

In all the four physiographic zones, there are large patches of saline/alkaline niches which are inhabited by characteristic indicator plants. Such tracts are more common in *Bangar* zone. The vegetation is the scrub savannah type with isolated, scattered trees belonging to species such as *Acacia arabica* (desi babul, babul, kikar), *Salvadora persica* (pilu, khanjar) and *Tamarix dioica* (jhau). The shrubby growth is represented by *Calotropis procera* (ak, akra, ankta, madar), *Capparis decidua* and *Carissa spinarum*. The perennial bushy herbaceous species of these habitats are *Kochia indica* (bui) and *Sueda fruticosa*. The annual species include *Chenopodium album* (bathua, chandan bathua), *C. murale*, *Croton bonplandianum* and *Heliotropium loc*. Clumps of *Desmostachya bipinnata* (dabb, dhab), *Erianthus ravennae* (moonj, sarkara) and *Vetiveria zizanioides* (gandar, jhaund) form impenetrable thickets. In reh pockets, the only plants observed are *Cressa cretica* (nunki) and *Sueda fruiticosa*. These pockets are widely met in Alipur-Narela and trans-Yamuna tracts.

Aquatic Vegetation

Marshy depressions, seasonal ponds, drainage canals in all four topographical zones, Yamuna and Hindan rivers, and irrigation canals-(western and eastern Yamuna canals and Agra canal), support aquatic vegetation. These aquatic ecosystems are inhabited by three communities, (i) free-floating. (ii) submerged and (iii) amphibious. The floristic composition of these communities varies according to the depth, the rate and velocity of flow and the nutritional status of waters and light compensation level. In swift flowing deep waters, both the free-floating and submerged communities are nearly absent, whereas the amphibious community is represented by an array of water-loving plants such as *Alternathera sessilis, Eleocharis atropurpurea, Phragmites maxima, Polygonum glabrum* (nali), *Scirpus tuberosus* and *Typha angustata* (cat tail, patera). In drainage canals and rivers where the rate and velocity of flow is less, the free-floating community comprises dense mats of *Eichhornia crassipes* (Bengal terror, water-hyacinth), *Ludvigia repens* (panki ghas) and *Paspalum distichum*. In still waters of marshy depressions and temporary ponds the free-floating plants are represented by duck weeds (*Lemna paucicostata, Spirodela polyrrhiza, Wolffia*) and bladder worts (*Utricularia stellaris*). *Trapa bispinosa* is often cultivated in these waters The submerged community includes algae such as *Chara* and *Nitella* and flowering plants like *Ceratophyllum demersum, Hydrilla verticillata, Potamogeton crispus, P. pectinatus, Vallisneria spiralis* and *Zannichellia palustris*. The rooted submerged plants such as *Ipomoea reptans* (sarnali, nali), *Monochoria vaginalis* (piazi, panighas), *Nymphaea nouchalli* (salak ki patuki, kamal-kakri, neelophal), *Sagittaria guayanensis*, *Scirpus littoralis* and *S. tuberosus* are common to amphibious and submerged communities of shallow water ecosystems. A little away from the marshy zone are clumps of *Alhagi pseudalhagi, Erianthus ravennae* and *Vetiveria zizanioides*.

The dried up drains and river beds, and marshy depressions are colonized by an unusual community during winter and summer months. The floristic elements comprise

both temperate and pantropical weeds such as *Alternanthera polygonoides*, *Amaranthus spinosus*, *Anagallis arvensis* (dharati-dhak, buchbucha), *Argemone mexicana*, *Centaurium ramosissimum*, *Chenopodium album*, *Cyperus pygmaeus*, *Euphorbia prostrata*, *Gnaphalium purpureum*, *Grangea maderaspatana*, *Heliotropium subulatum*, *Juncus bufonius*, *Mazus pumila*, *Melilotus indica*, *Phalaris minor*, *Poa annuua*, *Polygonum plebeium* (machechi, macheti), *Polypogon monospeliensis*, *Potentilla supina* (dodi), *Ranunculus sceleratus* (jaldhania), *Spergula fallax*, *Stellaria media*, *Trigonella incisa* and the recently introduced asteraceous weed *Solivia anthemifolia*.

Plants of Embankments and Bunds of Rivers, Irrigation and Drainage Canals and Tanks

To control flood waters during monsoon, to dam up water and to store rain water, extensive high bunds are constructed along *jhils* and drainage canals. The embankments along canals and rivers are wide and elevated. The vegetation of these man-made habitats exemplify the social forestry, and comprise monotypic stands of exotic, fast-growing trees such as *Acacia arabica*, *Eucalyptus citrioidra*, *E. globulus* and *Prosopis juliflora*. Wherever pure stands of these species are found, there is no undergrowth, but in the mixed stands of *Acacia arabica*, *Dalbergia sissoo*, *Parkinsonia aculeata*, and *Prosopis juliflora*, there is a succession similar to that of natural vegetation in hilly tracts. The embankments of Najafgarh drain exhibit such a pattern of the development of vegetation. The embankments of Hindon are barren, and there are signs of erosion.

Vegetation of Roadsides, Habitational Sites and Outskirts of Villages

In all villages located in four different topographic zones, only the main trunk roads are lined with trees, the lanes within villages are devoid of trees except a few self-sown *Acacia arabica*, *A. leucophloea* and *Prosopis juliflora*. Even the main roads in some routes are completely barren, and in some zones (Narela-Bawana) there is bushy low-maintenance landscape comprising *Acacia leucophloea*, *Capparis aphylla*, *Prosopis juliflora* and *Zizyphus nummularia*. These patches represent the secondary formation. The most common avenue trees in rural Delhi are *Albizia lebbeck* (siras), *Azadirachta indica* (nim, neem), *Dalbergia sissoo* (shisham), *Ficus bengalensis* (bargad, barh, barota), *F. religiosa* (pipal), *F. virens* (pilkhan), *Melia azedarach*, *Pongamia pinnata* (papri), *Syzygium cumini* (jamun), *Terminalia arjuna* (arjun, terminalia, patju, jumela) and *T. bellirica* (bahera, desi badam).

Within the villages and house compounds, the following plants are encountered: *Albizia lebbeck*, *Azadirachta indica*, *Ficus bengalensis*, *F. religiosa*, *Mangifera indica*, *Melia azedarach* and *Morus alba*. *Musa* sp. is occasionally cultivated in kitchen gardens. The outskirts of villages fringing the crop fields, abandoned places and vacant lands support the grooves consisting of *Acacia arabica*, *A. catechu*, *Prosopis juliflora* and *Zizyphus mauritiana*. The shrubby growth of these grooves is composed of *Calotropis procera*, *Capparis decidua* and *Zizyphus nummularia*. There are clumps of *Erianthus ravennae* and *Vetiveria zizanoides* along the roads and lanes.

The ruderales are represented by *Acalypha indica, Alternanthera pungens* (kantevali santhi), *Amaranthus spinosus* (kantevali chulai, goja), *Argemone mexicana* (untkatera, kateli, kandiari), *Blumea lacera, Cassia occidentalis* (ban bhates, dhadial), *C. tora* (pawad, chakowar), *Croton bonplandianum* (kala bhangra), *Erigeron bonariensis* (phulni), *Euphorbia hirta, Gomphrena celosioides* (kasia), *Laggera aurita. Parthenium hysterophorum, Solanum surattense* (berkateli), *Xanthium strumarium* (bhangra, bichhu, churchuta, kutia, kutta, chirchitta, bhurat, bhurchitta) and grasses such as *Bothriochloa pertusa. Chrysopogon fulvus* and *Cynodon dactylon* and *Dichanthium annulatum*.

The Delhi Development Authority has been developing green belts and woodlands along roadsides and vacant lands in all the four topographical zones during recent years. These are composed of pure stands of *Eucalyptus* spp. or *Prosopis juliflora* or mixed stands of *Eucalyptus* spp. and *Salix tetrasperma*. None of these green belts have any appreciable undergrowth, such as grasses. Consequently the local people are greatly dependent on the natural vegetation for fodder and fuel. This has resulted in the complete elimination of native species in some localities and stunted growth of trees in other places. Further, the green belts of *Eucalyptus* species are irrelevalent to the immediate needs of local people.

Vegetation of Cultivated Fields

Amidst the vast tracts of crop fields, one can encounter solitary or clumps of scattered trees such as *Acacia arabica, Albizia lebbeck, Eucalyptus* spp., *Ficus bengalensis, F. religiosa, Mangifera indica, Melia azedarach, Phoenix sylvestris, Prosopis juliflora, Salvadora persica. Zizyphus mauritiana* The bunds of crop fields are occupied by *Erianthus ravennae* and *Vetveria zizanoides*.

The weedy community of crop fields is of two types: (1) the community associated with the monsoon crop (kharif crops) and (ii) the community connected with the cold seasonal crops (rabi crops). The weedy taxa mostly belong to families Amaranthaceae, Cyperaceae, Gramineae, Leguminosae, Euphorbiaceae, Tiliaceae, Malvaceae, Convolvulaceae, Boraginaceae, Labiatae. Scrophulariaceae, Solanaceae, Rubiaceae, Compositae, Capparidaceae, Acanthaceae and Apocyanaceae.

The representatives of weeds of kharif crops are *Aeschynomene indica* (didhen, phulan), *Alternanthera sessilis, Borreria hispida* (satgathiya. ghathiyaghas, gatbhanjan), *Celosia argentea* (chilmil, sarwari,sarai), *Cleome viscosa* (hulhul), *Commelina benghalensis, Corchorus aestuans, C. olitorius, Cyperus iria, Echinochloa crusgalli, Gisekia pharnaceoides, Justicia simplex, Leucas cephalotes* (gubbha), *Oldenlandia corymbosa, Phyllanthus fraternus, Portulaca oleracea* (kulfa, salunak, nunka), *Trianthema portulacastrum* (santh, santhi) and *Triumfetta rhomboidea*.

The cold seasonal crops are infested with *Antirrhinum orontium, Asphodelus tenuifolius, Coronopus didymus* (jangali hala, panacholi, halo), *Fumaria indica* (papra, kilano,

pitpada), *Lathyrus aphaca*, *Lolium temulentum*, *Malva parviflora*, *Melilotus alba*, *M. indica*, *Phalaris minor*, *Polypogon monspeliensis*, *Sonchus arvensis*, *Spergula fallax*, *Stellaria media* and *Vaccaria pyramidata*.

The irrigated rice fields support the elements of marshy vegetation such as *Aeschynomene indica*, *Ammannia baccifera*, *A. senegalensis*, *Cyperus difformis*, *C. rotundus*, *Echinochloa colonum*, *E. crusgalli*, *Eragrostis tenella*, *Ludwigia perennis*, *Monochoria vaginata*, *Paspalum distichum*, *Sagittaria guayanensis* and *Scirpus tuberosus* and some others.

In waste places and in crop fields there are several cultigens which occur as escapes. Among them the most noteworthy are *Anethum graveolens*, *Brassica juncea*, *Capsicum annuum*, *Coriandrum sativum*, *Crotalaria juncea*, *Cucumis melo*, *Cucurbita moschata*, *Daucus carota*, *Eruca sativa*, *Linum usitatissimum*, *Luffa cylindrica*, *Lycopersicum esculentum*, *Raphanus sativa*, *Sesamum indicum*, *Spinacia oleracea*, and *Trichosanthes dioica*.

Vegetation of Orchards

In northern tracts plantations of fruit-yielding trees are observed. A few orchards are also observed in western and southern belts. The interesting aspect of these plantations is that they harbour several indigenous plants. *Acacia farnesiana*, *A. leucophloea*, *Anogeissus pendula*, *Dalbergia sissoo*, *Prosopis juliflora* and *Syzygium cumini* constitute the tree component, whereas the shrubby growth is represented by *Capparis sepiaria*, *Carissa spinarum*, *Diospyros cordifolia*, *Ehretia laevis*, *Kirganelia reticulata* and *Mimosa rubicaulis*. Some of these plants are grown as hedges. The most prominent climbing and straggling plants are *Abrus precatorius*, *Boerhavia repanda*, *Cardiospermum halicacabum*, *Cayratia carnosa*, *Cissampelos pareira*, *Coccinia grandis*, *Cocculus hirsutus*, *Dregea volubilis*, *Ichnocarpus frutescens*, *Leptadaenia reticulata*, *Mucuna prurita*, *Pergularia daemia*, *Rhynchosia minima*, *Teramnus labialis* and *Trichosanthes cucumerina*.

The ground flora consists of not only the ruderale formation but also the herbaceous components of natural vegetation. The conspicuous members of this category are *Cyperus kyllingia*, *Desmodium gangeticum*, *Dipteracanthus prostratus*, *Echinochloa colonum*, *Imperata cylindrica*, *Paspalidium flavidum*, *Phyllanthus fraternus*, *Triumfetta rhomboidea* and *Urena lobata*.

Wall Flora

The ecological habitats such as old walls, forts and dilapidated buildings support a characteristic, heterogeneous group of plants known as wall plants. These niches are located at Tughlaqabad, Mehrauli and Qutab as well as near the habitational sites of many villages. The inhabitants of these sites are *Aerva tomentosa*, *Boerhavia diffusa*, *Corchorus depressus*, *Coronopus didymus*, *Euphorbia hirta*, seedlings of *Ficus bengalensis*, *F. religiosa*, *Kickxia ramosissima*, *Launaea fallax*, *Lindenbergia indica*, *Nepeta hindostana*, *Nothosaerva brachiata*, *Portulaca oleracea*, *Psammogeton canescens*, *Rungia pectinata*, *Solanum nigrum*, *Tephrosia strigosa*, *Tridax procumbens* and *Vernonia cinerea*.

In some sites as in Mehrauli (behind Qutab), there is a secondary formation comprising *Capparis decidua*, *C. sepiaria*, *Carissa spinarum*, *Lycium europaeum* and *Zizyphus nummularia*.

Parasitic Plants

The total stem parasites are represented by two species of *Cuscuta*—*C. hyalina* and *C. reflexa*, whereas *Orobanche aegyptiaca* is the sole representative of total root parasites. The partial root parasites are represented by *Striga euphrasioides*.

The host-range of *Cuscuta reflexa* is very wide, and include *Adhatoda vasica*, *Bougainvillea spectabilis*, *Cordia dichotoma*, *Ehretia laevis*, *Nyctanthes arbor-tristis*, *Withania somnifera* and *Zizyphus nummularia*; *C. hyalina* parasitises on *Cleome viscosa*, *Trianthema govindia* and *Tribulus terrestris*. These two parasites are found throughout the year.

Orobanche aegyptiaca emerges out during cold season from the roots of several brassica crops such as *Brassica juncea* and varieties of *Brassica oleracea* (turnip, cabbage, knol-kohl, cauliflower) and *Ammi majus*. *Striga euphrasioides* is found associated with *Sorghum cernuum*, *Zea mays* and other grasses. It is strictly a monsoon plant.

The partial stem parasites are represented by only *Dendrophthoë falcata* which is found on the branches of *Acacia leucophloea*, *Dalbergia sissoo*, *Ehretia laevis*, *Ficus bengalensis*, *F. religiosa*, *Psidium guajava* and *Syzygium cumini*.

Orchids

No epiphytic orchids are found in the Union Territory. The sole representative of one of the largest families of India (ORCHIDACEAE) is the grass-like, somewhat pale greenish or brownish terrestrial orchid-*Zeuxine strateumatica*. It is concealed among grasses, particularly *Imperata cylindrica*, in most places.

Insectivorous Plants

The bladder worts are the representatives of this group of plants which obtain their nitrogen by assimilating the micro-organisms and insects by specialised structures known as traps. There are two aquatic species in Delhi. They are *Utricularia flexuosa* and *U. stellaris*, both of which are free-floating plants in still waters.

Conifers

The indigenous conifers are totally absent in the Territory, but most commonly cultivated gymnosperms in the urban sector are *Araucaria*, *Biota orientalis*, *Juniperus*, *Pinus roxburghii* and *Taxodium distichum*.

In rural Delhi, the most conspicuous conifer is *Biota orientalis*. It is exclusively cultivated in school yards and in compounds of Government Institutions.

Ferns and Fern Allies

The pteridophytic flora is rather poorly developed in the Territory because of semiarid climate. The representatives of fern allies are *Equisetum diffusum* (horse-tail) which grows along sandy banks of river Yamuna; *Marsilea* species which grow along swampy or marshy tracts; and the free floating taxa *Salvinia* sp. and *Azolia* sp.

The ferns are represented by *Actionopteris* sp. and *Adiantum caudatum*. Both are found in crevices of rocks. The cultivated taxa include *Adiantum, Dryopteris, Nephrolepis* and *Polypodium*.

Liverworts and Mosses

Due to semi-arid climate, coupled with dry air for the greater part of the year, the bryophytic flora is scanty in rural Delhi. There are only four liverworts. *Riccia crystalina, R. discolor* and *R. frostii* and *R. discolor* are common on moist, shady grounds, walls and pavements throughout the year, whereas *R. crystalina* is observed only during rainy season. *R frostii* is noticed along banks of Yamuna river.

The mosses are represented by 17 species, of which the most ubiquitous ones are *Bryum klinggraeffii, Fissidens brycides, Funaria hygrometrica, Hydrogonium gangeticum, Hyophila spathulata, Physcomitrium cyathicarpum* and *Semibarbula orientalis*. The other mosses reported from Delhi are *Brachymenium exile, Bryum atrovirens, B. coronatum, B. klinggraeffii, Ceratodon purpureus, Fissidens taxifolins, Gmnostomiella vernicosa, Hymenostylium recurvirostrum, Physcomitrium coorgense, Splachmobrayum flaccidum* and *S. indicum*.

The habitats for these mosses are river banks and moist, shady grassy places, brick walls, rocks and pavements.

Phytoplankton and Algae

Since the rural tracts of Delhi abound in drains, and irrigational canals, marshy depressions, temporary ponds and rivers waters substantial numbers of both microscopic and macroscopic species are algae found here Abut 396 species belonging to 119 genera of phytoplankton and algae have been recorded from Delhi.

The phytoplankton constitutes the chief source of food for fish and other aquatic animals. It also enriches the water with O_2 and contributes to the productivity of aquatic ecosystem. There are 150-160 species which are collectively known as phytoplanktonic species. The most dominant taxa are *Anabeana, Microcystis* and *Oscillatoria* of Cyanophyceae, *Scendesmus* and *Tetraedon* of Chlorophyceae, *Cyclotella* of Diatoms, *Cosmarium* of Desmids and *Euglenea* of Eugleneae.

The water blooms of still waters and drainage canals have indirect ecological effects on aquatic ecosystems (O_2 depletion and bad odour of waters). The conspicuous members of these water blooms are *Anabeana* and *Oscillatoria*. The other members of macroscopic algae which form a part of the submerged flora are *Chara, Mougeotia, Nitella,*

Pandorina and *Spirogyra*. A few species occue as epiphyes on other aquatic vascular plants such as *Hydrilla, Potamogeton* and *Vallisnaria*. The most common among them are *Bulbochaete, Cheatophora, Coleochaete* and *Oedogonium*.

In addition to aquatic algae, some members such as *Fritschiella* and *Vaucheria* are found in moist, shady grounds and rocks.

Mushrooms, Wood-rotting Fungi and Fungal Pathogens

During monsoon, fleshy fungi such as mushrooms and puffballs emerge out from sites, rich in decaying organic matter. The most common among them are *Agaricus bisporus, Cantharellus infundibuliformis, Lepiota* sp. and *Russula*. All these mushroom species are edible.

In Delhi, wood rotters are not polypores. However, species like *Ganoderma applanstum* and *G. lucidum* cause root rot diseases. Trunk rotters are mostly *Fomes fastuosus, Lenzites striata* and *Polystictus versicolor*. *Schizophyllum commune* is the chief wood rotting agaricus. Several Ascomycetes such as *Daldenia, Hypoxylon* and *Nectra* also play as a role in decaying wood.

The common fungal pathogens of woody plants are *Cercospora* (on *Calotropia Phyllactina* (on *Dalbergia*), *Graphiola* (on *Phoenix*), and *Ravenelia* (on *Accaia* and *Albizia*). Among fungal pathogens that attack crop plants, *Puccinia* on wheat, *Albugo* on crucifers and *Erysiphe* on cucurbits are common. The saprophytic fungi are represented by *Xylaria* on wood and *Cyathus* on hay.

Cultigens

Fruit-Yielding Trees

It is interesting to note that in single orchard several species of fruit-yielding trees are cultivated. The following are the common species: *Achras zapota* (checku), *Artocarpus heterophyllus* (kathal), *A. lakoocha* (barbal), *Averrhoa carambola* (kamrakh), *Carica papaya*, *Citrus aurantium* (nimbu kaghzi-nimbu), *C. maxima* (chakotra), *Eriobotrya japonica* (lokat, lukat), *Grewia asiatica* (phalsa), *Litchi chinensis* (lichi), *Mangifera indica* (aam or mango), *Manilkura hexandra* (khirni), *Morus alba* (toot), *Phyllanthus emblica* (amla, gonhla, aola), *Prunus domestica* (alucha, alu-bukhara), *P. persica* (aru), *Psidium guajava* (amrood), *Punica granatum* (anar), *Pyrus pyrifolia* (nashpati), *Syzygium cumini* (jamun) and *Zizyphus* (pemdi-ber, ber).

Field Crops

There are two crop seasons in rural Delhi-(i) the monsoon crop season (kharif) and (ii) winter crop season (rabi).

During rainy season, rice is grown in fields with irrigational facilities, whereas in rain-fed fields the following crops are cultivated. *Abelmoschus esculentus* (bhendi),

Cajanus cajan (arhar, thuar), *Capsicum annuum* (mirch), *Crotalaria juncea* (sanai), *Cyamopsis tetragonoloba* (guar, gawar), *Gossypium arboreum*, *G. herbaceum* (bari), *G. hirsutum* (bari), *Hibiscus cannabinus* (patsan, san), *Pennisetum typhoides* (bajra), *Sesamum indicum* (til). *Solanum melongena* (egg plant), *Sorghum cernuum* (jawar), *Vigna aconitifolia* (moth), *V mungo* (urd), *V. radiata* (mung), *V. sinensis* (lobia, rawas) and *Zea mays* (makki).

The rabi crops include *Avena sterilis* (jai), *Brassica campestris* (sarson), *Brassica juncea* (rai), *Cicer arietinum* (chana), *Hordeum vulgare* (jow), *Lens culinaris* (masur), *Linum usitatissimum* (alsi), *Pisum sativum* (mattar), *Trigonella foenum-graecum* (methi) and *Triticum aestivum* (gehu).

Sugarcane (*Saccharum officinarum*) is grown in fields where irrigational facilities are available.

Garden Crops

A large number of vegetable and spice producing species are cultivated during winters. The most popular are: *Allium cepa* (piaz), *A. sativum* (lahsan, lasun), *Anethum graveolens* (soa), *Beta vulgaris*, *Brassica oleracea* var. *botrytis* (phoolgobhi) *B. oleracea* var. *capitata* (bandhagobhi), *B. oleracea* var. *caulorapa* (ganthgobhi, knol-kohl), *B. oleracea* var. *gemmifera* (*Brussels* sprouts), *Coriandrum sativum* (dhania), *Cuminum cyminum* (zira), *Daucus carota* (gajar), *Dolichos lablab* (sem), *Foeniculum vulgare* (sonf), *Lactuca sativa* (salad), *Lycopersicum esculentum* (tamatar, tomatar), *Phaseolus lunatus*, *Raphanus sativus* (muli), *Spinacia oleracea* and *Trachyspermum ammi* (ajwain).

During summer months, several cucurbits are grown along sandy banks of river Yamuna. The common types are: *Citrullus lanatus* (water melon) and *Cucurbita moschata* (sitaphal, mitha kaddu), *Cucumis melo* (kharbuja), *Lagenaria siceraria*, *Luffa acutangula* (tori), *L. cylindrica* (ghiatori), *Momordica charantia* (karela), *Trichosanthes anguina* (chichinda) and *T. dioica* (palwal, parwal, parol).

Cut-Flower Plants

There is a great demand for cut flowers in the capital. The most conspicuous cut flower plants are: *Jasminum officinalis* (motia), *J. sambac* (bela, chamela, mongra), *Nerium indicum*, *Plumeria rubra* (champa), *Polianthus tuberosa*, *Rosa hybrida*. *Tabernaemontana divaricata* (chamela, chandni), *Tagetes erectus* (genda, marigold) and I. *patuls*.

Sacred Plants

There are some plants which are associated with religion. The commonest sacred plant grown in the house is *Ocimum sanctum* (tulsi). The others are *Azadirachta indica*, *Ficus bengalensis*, *F. krishnae*, *F. religiosa* and *Plumeria rubra*.

Hedge Plants

The following plants are grown as hedge plants along orchards, roadsides, fields and gardens. *Agave wightii*, *Duranta repens*, *Jatropha gossypifolia*, *Lantana camara*, *Law-*

sonia inermis, *Murraya paniculata* (kamini), *Nerium idicum* (kaner, chandni), *Pithecellobium dulce*, *Prosopis juliflora*, *Tabernaemontana divaricata* and *Thevetia peruviana* (peela kaner).

Plants of Gardens and Parks

There are no parks and gardens in rural Delhi, excepting those in the compounds of Government buildings and schools. The following plants are commonly found under cultivation: *Alstonia scholaris*, *Cassia fistula*, *Casuariana equisetifolia*, *Delonix regia*, *Eucalyptus citriodora*, *E. globulus*, *Grevillea robusta*, *Melia azedarach*, *Polyalthia longifolia* and *Pongamia pinnata*. The shrubs include *Acalypha wilkesiana*, *Barleria cristata*, *Caesalpinia pulcherrima*, *Cycas revoluta*, *Euphorbia pulcherrima*, *Hamelia patens* and *Hibiscus rosa-sinensis*.

The ornamental climbers are *Antigonon leptopus*, *Bougainvillea spectabilis*, *Campsis radicans*, *Clitoria ternatea*, *Ipomoea cairica*, *Jasminum officinale*, *Pyrostegia venusta*, *Quisqualis indica* and *Tinospora cordifolia*.

Aliens

During the last 100 years or so, particularly during world war II, several exotic plants have been accidentally or purposefully introduced into India. Most of them are native to South and Central America, and have been naturalized in India to such an extent that it is often impossible to distinguish them from the native ones. In some area they, in fact, dominate over the indigenous species. In rural Delhi, the most notorious ones are *Alternanthera pungens*, *Chenopodium ambrosioides*, *Croton bonplandianum*, *Erigeron bonariensis*, *Euphorbia geniculata*, *E. prostrata*, *Gomphrena celosioides*, *Malvastrum coromandelianum*, *Nicotiana plumbaginifolia*, *Oxalis latifolia*, and *Parthenium hysterophorum*. The water hyacinth (*Eichhornia crassipes*) forms dense mats along drainage canals, ponds and rivers, whereas *Lantana camara* forms impenetrable thickets on the ridge. The former leads to disruption in the aquatic ecosystem, while the latter prevents the regeneration of natural forests. *Parthenium hysterophorum* is proved to be allergenic to human beings and livestock.

Economic Importance of Plants Indigenous to Delhi :

Firewood Crops

The species of *Acacia*, *Anogeissus pendula*, *Diospyros cordifolia*, *Salvadora persica* and species of *Prosopis*, particularly *P. juliflora* are used as fuel woods. The other plants used as substitute are *Capparis decidua*, *Suaeda fruticosa* and *Zizyphus nummularia*. When these plants are also not available, the local people use *Alhagi pseudalhagi*, *Calotropis procera*, *Croton bonplandianum* and *Sida acuta*.

Fibre Plants

Abutilon indicum, *Agave wightii*, *Calotropis procera*, *Hibiscus micranthus*, *Leptadaenia reticulata* and *Urena lobata* are used as fibre plants.

Fodder Plants

The following plants are used as fodder for livestock: Species of *Acacia*, particularly *A. arabica* and *A. leucophloea*, *Aeschynomene indica*, *Alysicarpus vaginalis*, *Amaranthus spinosus*, *Anogeissus pendula*, *Boerhavia diffusa*, *Butea monosperma*, *Calotropis procera*, *Capparis decidua*, *Celosia argentea*, *Chenopodium album*, *Cocculus hirsutus*, *Crotalaria burhia*, *Digeria alternifolia*, *Ehretia laevis*, *Euphorbia dracunculoides*, *Ficus glomerata*, *Kochia indica*, *Morus alba*, *Pluchea lanceolata*, *Prosopis julifora*, *P. spicigera*, *Saeda fruiticosa*, *Vicia sativa* and *Zizyphus nummularia*. Among grasses. the most commonly used ones are *Bothriochloa pertusa*, *Brachiaria ramosa*, *Cenchrus ciliaris*, *C. setigerus*, *Chloris barbata*, *Chrysopogon aciculatus*, *C. fulvus*, *Cynodon dactylon*, *Dichanthium annulatum*, *Digitaria* spp., *Echinochloa colonum*, *E. crusgalli*, *Eragrostis* sp., *Heteropogon contortus*, *Oropetium thomaeum*, *Phalaris minor*, *Setaria glauca* and *Sorghum halepense*. Besides these grasses, sedges such as *Cyperus compressus*, *C. difformis*, *C. iria*, *C. niveus*, *C. rotundus* and *C. triceps* are also used as fodder.

Food Plants

The fruits of *Zizyphus nummularia* and *Z. mauritiana* are edible. The dried fruits in the form of powder form a staple diet for the local people during periods of scarcity. Tubers of *Ceropegia bulbosa* are also edible. The flowers, buds and fruits of *Capparis decidua* are pickled. The fruits of *Cordia dichotoma* and *C. rothii* are edible either raw or as pickled ones. The fruits of *Ficus glomerata* are edible. The young shoots of *Ipomoea reptans* are used as a vegetable. *Amaranthus blitum*, *A. gracilis*, *Chenopodium album*, *C. murale* and *Portulaca oleracea* are used as pot herbs.

Medicinal Plants

The following table lists the plant species, which are used in various diseases.

Table 11 *Native plant species and their medicinal value*

Plant species	Part/parts used	Disease
1	2	3
Achyranthes aspera	Ash	Cough
	Flowers and seeds	Snake bite
	Decoction	Renal dropsy
Adhatoda vasica	Leaves	Cough
Aerva lanata	Whole plant	Wounds
Artemisia scoparia	Whole plant	Purgative
Bacopa monnieri	Whole plant	Nerve tonic; gonorrheal troubles
Barleria prionitis	Whole plant extract	Whooping cough and tuberculosis
Boerhavia diffusa	Roots	Skin inflammations
Calotropis procera	Leaves	Cough
	Latex	Boils

1	2	3
Capparis decidua	Young shoots and leaves	Boils, eruptions and swellings
Centella asiatica	Whole plant	Antidote to cholera and heat effects, and also in curing madness
Cissampelos pareira	Leaves	Sores and itches
Citrullus colocynthis	Fruits	Strong purgative and stomach troubles
Carissa spinarum	Root	Simla disease of cattle and insect repellant
Cleome viscosa	Leaves	Ear troubles
Cocculus hirsutus	Leaves	Eye troubles
Cressa cretica	Whole plant	Cooling medicine
Fagonia cretica	Whole plant Ash	Spermatorrhoea Anaemia in children
Hemidesmus indicus	Root	Snake bite and veneral diseases
Salvia santolinaefolia	Plant extract	Gonorrhoeal troubles
Sida cordifolia	Seeds	Leucorrhoea; spermatorrhoea and gonorrhoea
Solanum surattense	Fruits	Sores
Sonchus arvensis	Latex	Eye troubles
Tephrosia purpurea	Pods	Body pains and inflammation troubles
Tribulus terrestris	Fruits	Backache
Urginea indica	Bulbs	Cardiac stimulant, diuretic
Zizyphus nummularia	Fruit	Stomach disorders

Miscellaneous Useful Plants

The culms of *Erianthus ravennae* are used for making chairs, muddas, chappars or temporary house roofs and ropes, and the leaves are used for making mats. The roots of *Vetiveria zizanioides* are used for extraction of oil of vetiver, and also for the preparation of khas-khas mats handfans and temporary house roofs. Twigs of *Adhatoda vasica* and *Calotropis procera* are used for making gunpowder and charcoal. The wood of *Acacia leucophloea Anogeissa pendula* and *Dalbergia sissoo* are used for making agricultural implements. The roots of *Arnebia hispidissima* yield dye which is used for colouring hair oils. The leaves of *Typha angustata* are used for thatching roofs.

Allergenic Plants : As a result of extensive studies (using skin tests) carried out by Shivpuri and Singh on pollen allergenic plants, several plants of Delhi are now known to be harmful to patients suffering from respiratory disorders. It has been estimated that nearly 1% of the total population suffers from bronchial asthma. Altogether 86 pollen types are recorded in the atmosphere of Delhi. Following table provides a list of 23 major pollen allergenic plants and their pollination periods.

Table 2 : *List of important allergenic plants of Delhi based on skin test results*

Name of plants	Pollination period
Trees	
1. *Ailanthus excelsa*	January-March
2. *Anogeissus pendula*	July-August
3. *Broussonetia papyrifera*	February-March
4. *Cassia siamea*	September-February
5. *Holoptelea integrifolia*	March-April
6. *Morus alba*	February-March
7. *Salvadora persica*	December-March
Shrubs and Undershrubs	
8. *Cassia occidentalis*	February-April & July-August
9. *Dodonaea viscosa*	January-February
10. *Ricinus communis*	January-April & July-October
Herbs (Non-Graminaceous)	
11. *Amaranthus spinosus*	January-December
12. *Artemisia scoparia*	September-November
13. *Brassica campestris*	December-March
14. *Cannabis sativa*	January-December
15. *Chenopodium album*	November-February
16. *Plantago major*	August-November, February-March
17. *Xanthium strumarium*	September-October
Gramineae	
18. *Cenchrus ciliaris*	August-October
19. *Cynodon dactylon*	January-December
20. *Eragrostis tenella*	July-October
21. *Imperata cylindrica*	March-October
22. *Pennisetum typhoides*	August-October
23. *Sorghum vulgare*	August-October

Conservation : The human interference in the vegetation has resulted in the degradation of dry deciduous type with *Anogeissus pendula-Acacia senegal* community into a secondary formation of scrubjungle composed of *Acacia-Zizyphus* community. The impact of biotic factors such as grazing, felling of trees and lopping of branches by local inhabitants, and urbanisation and industrialisation of rural tracts have led to the extinction of some species (*Decaschistia crotonifolia*, *Hibiscus surattensis* and *Melhania futteyporensis*), endangered some other species (*Acacia catechu*, *Grewia flavescens*, *Rhus mysurensis*), substantially harmed some others (*Dichrostachys cinerea*, *Elacourtia indica*, and *Mimosa hamata*), and transformed several other into crooked, uneconomical types (*Acacia leucophloea* and *Anogeissus pendula*). It is rather amazing that a plant like *Boerhavia diffusa* is becoming rare. The straggling bushy suffruticose form of *Acacia leucophloea* (a tree spacies) is a common sight in rural tracts.

The development of green belts and woodlands consisting of pure stands of *Eucalyptus* and *Prosopis* along roadsides and vacant lands in rural tracts not only increased the biotic pressures on the indigenous vegetation, but almost prevented its regeneration. This is because of the fact that the exotic species are unpalatable to livestock and inhibit the undergrowth including grasses, but promote the growth of obnoxious weeds. The villagers also use plants like *Celosia argentea* and *Tagetes erecta* as fuel.

The only way to conserve the indigenous vegetation is to develop low maintenance landscape comprising indigenous species along roadsides and vacant lands. Another way to conserve the indigenous flora is to declare the hilly tracts, particularly the Mehrauli and Qutab Zones as 'Nature Reserve'.

CHAPTER II

PEOPLE: THEIR SOCIAL AND RELIGIOUS LIFE

There is an old saying "नौ दिल्ली दस बादली सात वजीराबाद". It means that Delhi, Badli and Wazirabad were ravaged and rebuilt nine, ten and seven times respectively. The latter two suffered repeatedly because of their proximity to the centre of power i.e. Delhi. The invaders encamped at these places before launching the final assault on the city. The villages around Delhi also suffered loot and arson as they provided the most convenient source of food and fodder for the invading armies.

The composition of the population of Delhi must have been greatly influenced by its geographical position, metropolitan character, political situation and invasions. Being the centre of power it must have attracted people from far and wide. But frequent invasions and violent changes in government must have led to dispersion of population from time to time. The invasions of Taimur, Nadirshah and Durrani led to many massacres in Delhi and these did not evidently spare the rural population. After the failure of the revolt of 1857, the Delhi villages also suffered greatly. Many villagers were killed at the hands of the British in the process.

The content of the population also changed with the frequent changes in the government. New people came with the new masters and they tended to spill over into rural areas

The Population

According to famous historian, F.P. Spear, the population of Delhi during the reign of Emperor Aurangzeb (1657-1707) was about 20 lakhs. With the death of Aurangzeb there ensued a long period of political instability. Kings came and went in quick succession. The exodus of population was the natural result. The invasion of Nadir Shah in 1739 greatly added to this insecurity and the population was reduced to a mere 5 lakhs. The British choose Calcutta for their capital and this led to further decline in the fortunes of Delhi. Absence of royal patronage hindered the growth of industry and business. Consequently, Delhi suffered in terms of population as well.

The British rule in Delhi started in 1803 when Lord Lake defeated the Marathas in the battle of Patparganj near Delhi. During the first sixty five years of the British rule the population of Delhi and its villages was as under:

Year	*Population*
1803[1]	1,50,000
1843[2]	3,30,000
1847[3]	1,60,279
1856[4]	1,82,000
1868[5]	1,54,417

In 1803, when Delhi was declared a province for the purpose of administration under the British Rule, peace and order returned after a long spell of unrest. Quite naturally the population increased from 1,50,000 in 1803 to 3,30,000 in 1843. Then fallowed a period of political uncertainity, including the 1857 rebellion against the British. As a result there was a considerable decrease in population.

Area of Delhi including Rural Area

The area of Delhi over the years has been as under:

Year	*Area*
1921	1536 sq. km.
1931	1484 sq. km.
1941	1447 sq. km.
1951	1497 sq. km.
1961	1484 sq. km.
1971	1485 sq. km.
1981	1483 sq. km.

There has not been much variation in the total area of Delhi after 1931 excepting that Delhi gained by a few sq. km. as a result of fixation of boundaries between the province of Uttar Pradesh and Delhi. What caused the loss of 52 sq. km. in area between the censuses of 1921 and 1931 is not known.

Population of Delhi (Rural & Urban)

For a proper understanding of the trend in the population of rural Delhi it is necessary to keep in view the total demographic chart of Delhi. The following table is instructive in this respect.

1. Delhi Gazetteer, 1974.
2. German Traveller Vonoerliche.
3. Delhi Gazetteer, op cit.
4. According to Simon Ferver
5. Delhi Gazetteer, op cit.

Urban and Rural Population of Delhi (1901-1981)

Year	Total population	Urban Population	Rural Population
1901	405819	208575	197244
1911	413851	232837	181014
1921	488452	304420	184032
1931	636246	447442	188804
1941	917939	695686	222253
1951	1744072	1437134	306938
1961	2658612	2359408	299204
1971	4065698	3647023	418675
1981	6220406	5768200	452206

(Delhi Statistical Handbook, 1985)
Also see Pl 1.1, 2

It will be seen from the Chart that the population of the urban and rural Delhi was almost equal in 1901. But a declining trend is clearly perceptible in rural population from 1911. In this year Delhi was declared the Capital of the country and in the changed situation considerable rural population was attracted towards the city.

The break-up of the rural population recorded by the last three censuses was as follows:

Year	Total Rural Population	Male	Female	Shortfall of female population from male population
1961	299204	161992	137212	24780
1971	418675	229424	189251	40173
1981	452206	249833	202373	47460

(Delhi Statistical Handbook, 1985)

During the decade 1961-71, the increase in population was 119471 while during the next decade, the increase was 33531 only. Migration for employment to the city and acceptance of small family norms bythe people seem to explain this.

Distribution of Rural Population (trade wise) 1981

The trade wise distribution of workers in the rural population of Delhi is given in the following table:

Categories		Males	Females	Total
A. Manual Jobs				
1.	Agriculture	25340	2274	27614
2	Agricultural Labour	9690	1669	11359
3.	Mining, Quarrying, Livestock Forestry, Plantation, Orchards, etc.	6077	845	6922
4.	Household Industries	1928	224	2152
5.	Manufacturing Works (other than Household)	20920	3379	24299
6.	Construction Work	4352	654	5006
7.	Trade and Commerce	6670	225	6895
8.	Transport, Storage, and Communication	10170	191	10361
9.	Other Services	31366	2879	34245
B.	Marginal Workers	2130	5364	7494
C.	Non-Workers	131189	184669	315858
Grand Total of A,B,C.		249832	202373	452205

(Delhi Statistical Handbook, op. cit.)

This shows that out of the total rural population of 452205 only 27614 i.e. about 5 per cent are farmers. The lack of interest in farming on the part of rural population is ominous. Increased mechanisation of farming and use of fertilisers have also not been able to attract the younger generation to farming. With the growing popularity of white collared jobs, the number of actual farmers is likely to come down further.

The number of cottage and small scale industries was 1928 in 1981. But as a result of financial and technical help and guidance from the government more people have been attracted to this field of activity.

Male-female ratio in the rural population of Delhi is given in the following table:

Ratio of rural population age-group wise 1981

Age group	Male	Female	Total
0–14	100491	87533	188024
15–19	27975	20321	48296
20–24	25303	20249	45552
25–29	21547	15956	37503
30–34	28414	22754	51168
40–49	19841	15449	35290
50–54	12731	10013	22744
60 +	13468	10004	23473
Age not stated	63	94	157
Total	249833	202373	452206

(Delhi Statistical Handbook, op. cit.)

Fluctuations in rural population

The rural population of Delhi has fluctuated from time to time due to various factors. This is indicated in the following table:

Year	Total population	Males	Females	Fluctuations during the decade in the total	%age
1901	1,97,244	1,05,589	81,655	---	-
1911	1,81,014	99,232	81,782	—16,230	—8.24
1921	1,84,032	99,723	84,309	+3.018	+1.74
1931	1,88,804	1,01,518	87,286	+4,772	+2.59
1941	2,22,253	1,20,415	1,01,037	+33,449	+17.52
1951	3,06.938	1,67,106	1,39,832	+84,685	+38.10
1961	2,99,204	1,61,992	1,37,212	—7,734	—2.52
1971	4,18,675	2,29,424	1,89,424	+1,19,471	+39.93
1981	4,52,206	2,49,833	2,02,373	+3,3631	+7.02

The table reveals that during the decade 1901–1911, the rural population of Delhi decreased by 16230 persons. The number of males decreased by 6357 while that of the females increased by 127. Owing to Coronation Durbar in 1911 many males got employment in the city and therefore, their number decreased in the villages.

During 1931-41, the rural population of Delhi increased by 33,449-males 18,897 and females 13751. The building of the Capital had been completed by this time and people had returned home in the absence of employment there. During 1941-51, the population of Delhi increased by 84,685 due to the influx of refugees from West Pakistan. Between 1951-61, the population showed a declining trend owing to large migrations but it again picked up during 1961-71.

Density of Population

The density of population in rural Delhi vis-a-vis urban Delhi during the past eighty years is given in the following table:

Year	Population per sq. km. (Rural)	Population per sq. km. (Urban)	No. of dwellings per sq. km.	
			Urban	Rural
1901	135	10568	--	—
1911	133	11798	---	—
1921	140	1812	444	—
1931	144	2639	581	—
1941	171	3470	836	—
1951	243	7169	1250	—
1961	258	7225	1429	—
1971	403	8172	—	—
1981	507	9745	---	

Male-Female Ratio

Male-female ratio in the population of Delhi during the past 80 years is given in the following table:

No. of females per 1000 males

	1901	1911	1921	1931	1941	1951	1961	1971	1981
Total (Rural + Urban)	862	793	733	722	715	768	785	801	810
Rural areas	916	869	845	800	846	837	847	835	840
Urban areas	817	740	672	670	677	754	777	—	—
Shortfall in urban areas vis-a-vis rural areas	99	129	173	190	169	83	70	—	—

It is significant that female population in rural Delhi has always been less as compared to male. In 1901, the number of females was 81,655 as against 1,05,589 males, the ratio being 1000:916. After 80 years in 1981, the number of males was 2,49,833 as against 2,02,373 females. Thus female population was 81 per cent of the male population.

The number of females has been less than the males even in the urban areas. In 1901, while the sex ratio in rural Delhi was 1000:916, it was 1000:817 in urban Delhi. In 1961, the ratio of population was 847 female to 1000 male in the rural Delhi and 777 female to 1000 male in urban Delhi.

Deserted Villages

The number of villages in Delhi has been gradually decreasing during the past 60 years as indicated in the following table:

Year	Total Number of villages	Deserted villages	Populated villages
1921	357	43	314
1931	356	49	307
1941	354	49	305
1951	341	37	304
1961	300	34	276
1971	258	15	243
1981	–	—	—

The table shows that the number of deserted villages was 49 in 1941. After 1947, the Government acquired many villages to rehabilitate the displaced persons from Pakistan. Consequently, the number of villages came down from 305 in 1941 to 243 in 1971 i.e. a decrease of 62. If this process continues, the entire rural Delhi will be engulfed by the tide of urbanisation in near future

Language wise distribution of Population

According to Delhi Gazetteer (1912 Edition) the main language of the people of Delhi was Urdu but the people in villages (even living on the outstkirts of the walled city) spoke Hindi or 'Brij Bhasha' which contained an admixture of Persian words. Hindi continues to be the dominant language in rural Delhi is evident from the following table:

State of Hindi Language	1961	1971
Number of people speaking Hindi in urban areas (%age of total population)	74·7	75·97
Number of people speaking Hindi in rural areas (%age of total population)	98.1	96.90

This shows that the number of Hindi speaking people in urban areas of Delhi has increased by 1.27 per cent. It has, however, gone down by 1 2 per cent in the rural areas. Large influx of Hindi-speaking rural people into the city and the growth in the number of Punjabis settled in rural Delhi explains this. The number of Punjabi speaking people rose to 1.48 per cent in 1971 as against 0.47 per cent in 1961. The Hindi spoken in rural Delhi is akin to that of Sonepat and Rohtak districts of Haryana.

The language wise breakup of the rural population is as follows:

	Language	Population
	All Languages	4,18,604
1.	Hindi	4,05,711
2.	Punjabi	5,965
3.	Urdu	4,649
4.	Bengali	292
5.	Tamil	262
6.	Sindhi	574
7.	Malayalam	367
8.	Marathi	170
9.	Gujrati	80
10.	Telugu	110
11.	Gorakhali/Nepali	217
12.	Lahanda	5
13.	English	73
14.	Kannada	29
15.	Kashmiri	31
16.	Kaunkani	9
17.	Dogri	36
18.	Oriya	17
19.	Assammese	4
20.	Tibetan	3

From the language point of view the rural Delhi can be classified in four groups viz. Dabari, Bangru, Gurjar (Khadar) and Braj (Pahdi). All people speak Hindi but there are minor differences in the way and manner it is spoken of in each division. The dialect Dabari is spoken in Najafgarh Block area and is akin to the dialect of Gurgaon district. The Bangru is spoken in the north and north west of rural Delhi comprising

villages of Alipur and Khanjhawala Blocks and it bears affinity to the dialect used in adjoining Rohtak and Sonepat districts. The Gurjar dialect is spoken in the eastern part of Delhi and is akin to the dialect used in trans-Yamuna area of Uttar Pradesh. Braj is spoken in the south of rural Delhi and it bears affinity with the dialect used in Ballabhgarh and Palwal areas of Haryana. But differences do not end here. Even in one village, two dialects may be found in use. To illustrate the point the Jatavs of Delhi villages speak two different dialects-one that of the village they live in and the other that they use among themselves.

Religion-wise Distribution

Distribution of rural population of Delhi according to religion (1981) is as follows:

Religion	Total	%ge of rural population
Buddhists	219	0.05
Christians	1,104	0.24
Hindus	433,41	95.87
Jains	437	0.10
Muhammedans	11,116	2.46
Sikhs	5,713	1.26

(Census of India: Delhi, Series—28, 1981)

Caste Composition

Scheduled tribes and castes form a substantial part of rural population. In 1981 their population was 1,04,012. The growth in their population till 1981 is given in the following table:

	Population of Scheduled Castes			
	1951	1961	1971	1981
Rural Delhi	67993	69312	104999	104012

The number of scheduled castes inhabiting the Union Territory is said to be thirty six Of these the following are better known:

1. Chamar, Jatav, Mochi, Ramdasia, Raidasi or Raigar etc.
2. Choorha (Balmiki)
3. Choorha (Scavenger)
4. Dhanak
5. Dhobi

6. Dom (Mirasi)
7. Julaha (Weaver)
8. Khatock
9 Koli
10. Madasi
11. Nat

Each of these castes is divided in many sub-castes. Kanwal, Jagre, Panwar, Sagarwal, Kachriya, Dhania, Maria, Rang Barveyal, Dhiman, Sinhwal and Lalania are some better known chamar sub-castes in rural Delhi. Among the choorahs the well known sub-castes are Kandera, Bhanot, Tak, Hathwal, Sangwan, Lakhar Sauda, Jhajhotadhar, Reethlan, Chandal, Kalania, Jagpawar, Sagri Chauhan, Beniwal, Pegwal, Dhakotia and Karotia. Dhanuk, Dhobi, Dom,k Julaha are also divided in various sub-castes.

Jats

The Hindu Jats form the largest segment of rural population Geographically they may be divided into two groups-those of the north and middle and those of the south. Traditions connect the Jats of the south with the Jat rulers of Bharatpur. The northern Jats on the other hand refuse any such connection.

The Jats are classified into several *gotras*. The most widely met among these include Mann, Deshwal, Dalal, Dabas, Khatri, Jatrana Shokeen, Tokas, Mehlawat, Shehrawat, Thakran, Ahlawat, Chillar, Chhikara, Lakra, Beniwal and Falswal.

Gujars

Gujar is the second important tribe of rural Delhi. In fact the city of Delhi is surrounded by many Gujar villages. It appears that Gujars have lived in this part of the country from very early times.

Brahmins

Brahmins form the third important segment of rural population. They hold superior status in the society. Some Brahmin families are engaged in agriculture and some practise the traditional profession of *puja-path* or priesthood. The Brahmins now devote more attention to education with a view to get a job. Bharadvaja, Vats, Kaushik, Vashistha, Atri, Mudgal, Shandilya and Gautam are important Brahmin gotras in rural Delhi.

Ahirs

Ahir is another important tribe of rural Delhi. They claim to be of Rajput origin. The Ahirs are good cultivators but their main profession is cattle keeping for milk and milk products.

Rajputs

Rajputs form another important group in rural population of Delhi. They are a sturdy people, highly conscious of their self-respect. There are several sub-divisions of Rajputs, viz. Tomar, Shisodia, Gehlavat, Rana, Rathaur, Paul, Bhati, Banwar, Tanwar, Jado, Chauhan, Rawat, Khichi, Gauravas, Gor, Gholah, etc.

Tyagis

Tyagis are said to have been Brahmins by origin. They, however, gave up the practice of collecting alms and therefore, came to be known as Tyagis. Also called Mohyal and Bhumihar they are good cultivators.

Banias

Banias though not large in numbers are well spread in Delhi villages. Their main profession is business. Important Bania castes or *Gotras* found in rural Delhi include Agarwal, Bansal, Goel, Jain, Singhal, Mittal, Bindal, Jindal, Khandelwal and Kansal.

Bharbunjas, Banjaras, Gadarias, Jhinwars, Bhats, Jogis, Miraris, Rawals and Kanjars are some of other castes which are found in rural Delhi.

Muslims

The number of Muslims in the rural Delhi is not large. Pathan, Saiyad, Sheikh, Zalali, Deshwal, Multani, Sakke, Khan and Mev are the main Muslim castes in this area.

The following table shows the caste-wise distribution of the villages of Delhi. The classification is based on the predominant caste living in a particular village.

S. No.	Castes	Number of Villages	Percentage
1.	Jat	118	39.3
2.	Gujar	33	11.0
3.	Ahir	31	10.3
4.	Rajput	26	8.6
5.	Brahmin	15	5.6
6.	Chamar	6	2.0
7.	Tyagi	5	1.7
8.	Muslim	5	1.7
9.	Others	7	2.4
10.	Villages for which details are not available	54	18.0
	Total	300	100.0

It is interesting that a pattern is discernible in the distribution of main castes in the Union Territory. While the Jat and Ahir villages are located to the west of Yamuna river, Gujar villages are generally located to the south and east of the river. Rajput villages are spread all over the region. In the distribution of villages in which the other castes are in a majority, no definite pattern is seen. Jat villages are evenly spread all over the Union Territory of Delhi except to the east of the river.

Social customs and ceremonies

Birth

Customs play an important part in the life of the people, whether they relate to birth, marriage or death. Birth of a child, specially that of a male child is an occasion of great rejoicing in the family. If the birth takes place at an inauspicious moment offerings are made to Brahmins to save the child from evil effects. On the second day of the birth, the mother is given a ceremonial bath with lukewarm water. *Chhati* or Sixth day ceremony is observed when another bath is given to the mother. A feast which includes *khichari* and *Halwa* is given to close relatives on this day. The mother is given *karha* a sweet drink, which includes several herbs, to keep her physically fit. After ten days, the *pandit* is invited to name the child and the ceremony is called *nam-karan sanskars.* The *dasuthan* or the ceremony of purification is also observed on this day. The mother who with the child, remains confined to the room till ten days is allowed to move and carry on ordinary house work after this. Sometimes a feast is hosted by the grand parents to celebrate the occasion in which besides kith and kin, acquaintances are also invited. After 40 days, the mother is given another bath and released from the confinement. A *havan* is performed to mark an end of all the ceremonies concerning the child-birth.

Birth of a female child among the peasant labourers and artisans is not unwelcome because a female child means a helping hand to mother.

Marriage

Marriage is generally preceded by betrothal ceremony. In the early decades of this century, the ceremony was performed at the tender age of the child. No minimum age was, however, prescribed for this ceremony and the age could range between 9 to 10 years. With the help of the *pandit* or *nai*, a suitable match was found out for the girl and after the approval of the father the matter was settled. This practice is no more common and the parents themselves find out a suitable match for their daughter. In finding a match, care is taken that the *gotra* of negotiating parties is not the same. Horoscopes are invariably matched before formalising the relation. On an auspicious day the *pandit* and *nai* go to girl's-place to perform the *lagan* ceremony. Betrothal follows this. A function is organised at boy's house where girl's father comes with relatives to perform *tika* ceremony. Sweets, clothes and cash are offered to the boy and his family on this occasion.

Marriage generally follows after one to five years of betrothal ceremony. But this limit is not always observed. In some cases, the limit may exceed even ten years. But it is considered decent if the girl is married before she attains the age of 15. Among the Jats, the girls were generally married by the age of 11 years. But with the changing times this outlook is also changing. *Gauna* is now celebrated in a short interval after formal marriage and the latter soon after betrothal.

Marriage is called *shadi* in local language. *Pandit* fixes an auspicious date for the ceremony and this is communicated to girl's father on a sheet of paper marked with turmeric and rice. This paper is called *pili chithi* or *lagan chithi*. On the day of marriage bridegroom's party called *barat*, goes to bride's place. Women in most communities do not accompany *barat*; in a few others, they do. The *barat* is received by the bride's father, relations and friends. The bride's mother and other ladies of the family perform *arti* of the bridegroom at the time of reception. Usual ceremonies of *phera, kanyadan* and *saptapadi* follow. At the time of marriage, the *girl* is offered some presents which include ornaments, dresses, household utensils, furniture etc. Dowry is given according to the social and economic status of the family. Sometimes the question of dowry leads to dispute between the two parties resulting in abrupt end of the marriage ceremony. According to a survey conducted in the villages of Bhalsua Jahangirpur in 1962, the average cost of dowry varied from 550/- (in *nai* family) to Rs. 1627/- (in Ahir family). Different dowry acts have made no dent on this practice.

On the next day of *vidai*, the bride went back to her father's house with her brother, where she stayed till the age of puberty. *Gauna* ceremony was performed only when the girl attained the age of puberty. After this the boy and the girl formally lived together. The period between marriage and *gauna* is gradually reducing because the child marriage is no more common. *Gauna* is now observed on the day of marriage itself.

Inter caste marriages are strictly prohibited in the villages of Delhi. Any violation leads to expulsion from the caste.[1]

Divorce was almost unknown among the Hindus in rural Delhi. As the marriage performed under Vedic rites was indissoluble no legal provision for it existed among the Hindus prior to 1955.[2] Among the backward and scheduled castes, divorce could however, be brought about with the permission of the *caste panchayat*.

Hindu traditions and customs do not permit the widow remarriage. Such marriages are, however, legal under the Hindu Marriage Act of 1956. But the custom of remarriage is quite common among the backward and scheduled castes of rural Delhi.

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1. Census of India 1961. Vol. XIX p. 108.
2. Hindu Code Bill was introduced in 1951.

Such a remarriage is known as *karewa* or *karao*. *Karao* is not usually performed within a year of the husband's death. The *Karao* wife is treated a legitimate wife in all respects. Among the Muslims widow remarriage is prevalent.

Disposal of the Dead

The Hindus cremate their dead. The eldest son or nearest relative sets fire to the pyre prepared for the dead. The bones that remain unburnt are called *phul*. Devoted sons take the remains to Ganga for immersion. Well-to-do sons build a kind of memorial (Chhatri) over the spot where the corpse is burnt. This practice is no more observed as the land is becoming scarer and scarer. The poor who cannot afford the costly wood cast their dead in the river only partially burnt. Children under twelve are generally buried.

Dwellings and Furniture

In the past, mud huts with thatched roof were a common sight in the villages of Delhi. But all-round development has affected the rural life too and large pucca cement and brick or stone houses are now common in the villages. But housing pattern of rural Delhi is largely conditioned by the economic resources of the villagers Availability of the building material also determines the character of rural dwellings To illustrate the point, the houses of Mehrauli block are mostly made of stones because stone is easily available there. The dwellings of rural Delhi generally represent, a mixture of rural and semi-urban architectural patterns.

The dwellings in rural Delhi generally comprise a *ghar* or residence, *baithak* or sitting room and *gher* or cattle shed. *Ghar* serves as the residence for all members of the family. *Baithak* constructed a little away from the house, is a sitting room where ladies are not generally permitted. *Gher* is made in the open yard of the house. It is often used for storing purposes. The dwellings of rural Delhi represent three forms of structure viz. *kaccha*, *pucca* and *mixed*.

Furniture

Khatia or cot is the only article of furniture common to every household in rural Delhi, irrespective of its social and economic status. The strings for *khatia* are locally manufactured out of the hemp grown in the fields. *Khatia* is used both for sitting and sleeping purposes. Chair, table, stool and bench are also gradually coming into vogue. The *moorha*, made of straw, reeds and jute is very popular in the villages. Well-to-do-families possess double beds, sofa sets, dressing tables, gramophones, radio sets, transistors etc. With the electrification the television sets have also become popular in the villages. Clay toys, idols and pictures adorn the nitches and the walls of the house.

Food and Drinks

Cooking media in rural Delhi is mostly dried cow-dung cakes called *uple.* This is used by all the people irrespective of their economic and social status. The well-to-do families are gradually changing over to *gobar gas* plants or kerosene stoves. Recently, the use of solar cooker has also been introduced in the villages. In some villages, adjacent to the city, the cooking gas is also becoming popular.

Wheat, gram, jawar and *bajra* are the main cereals which form the staple food of rural Delhi. Maize is consumed sparingly. Vegetarian food is popular. Non-vegetarian food so far popular with the lower castes is gradually becoming popular with the upper castes also. Pulses like *urad, moong, chana, arhar* are widely used, by all people.

The thick *roti* made of wheat is called *pani ki roti*. The thin *chapati* made after rolling is called *phulka* or *manda*. The people owning milch cattle use milk, curd, butter etc. Delicacies such as *halwa, poori, khir* etc. are prepared on festive occasions or on the visit of a guest.

Dress

In the early decades of the present century, hand woven khadi was in common use with the villagers. The dress worn by the people now is made of coarse cloth produced in the mills. The main reason for the change is that the mill-made cloth is cheaper and easily available. The dress worn by the villagers is still by and larged the traditional one, viz. *dhoti, kurta,* and *turban* variously called *safa, pagri* or *mundansa*. In recent years, the Gandhi cap has also become popular. But the farmers still prefer the traditional turban as it provides better protection against sun in summer and cold winds in winter. During the winter people use a *chadar* or *khes* made of thick yarn, or a *razai* which is worn like a cloak. Poor people also wear *kamri* a cotton stuffed jacket.

The above dress pattern is however, confined to old people now. Young men in service and students, prefer shirt, pyjama, bushirts, trousers, half pants. In winter woolen coats and trousers, mufflers, sweaters etc are widely used. The children go around just in a shirt.

The female costume comprises *kamiz, lehanga* or *ghagra* and *dopatta* or *orhna*. Their clothes are mostly in three dominant colours viz blue, red and yellow. *Ghagra* is made of coarse printed cloth, and more the cloth used, the better it is considered. Pure white is avoided by women as it is considered inauspicious. Wearing of a white *dupatta* or veil by a woman indicates that she is a widow. In winter, women cover themselves with thick coarse *chadar* or shawl, some even wear sweaters. In summer, some women wear an *angi*, a short sleeved vest which covers the breast but leaves the waist bare. Of late, *saluwar*, *kamiz* and *dupatta* have also found their way in rural Delhi. But this dress is

popular with the younger generation only. Young married women belonging to Jat and Bania families also wear *saris, petticoats* and blouses or *jumpers*. Young girls in the villages generally wear *kamiz* and *salwar*.

For footwear the males mostly wear the locally made laceless pump shoes known as *juti*. Chappals and laced shoes are generally used by those people who are in service Young boys sometimes wear cheap canvas shoes, but generally they go bare-footed. The women wear *jutis* embroidered either with coloured thread or with tilla-silver thread. Slippers and chappals are gradually becoming popular with the village women because they are cheap and light. Sandals are worn by newly married women.

Ornaments

Indian women are known for their love of ornaments. Women in rural Delhi use a variety of ornaments. These are generally made of gold and silver though cheaper metals are also in use among the poor. Ornaments are considered to be the status symbol of a family. The ornaments worn in the ear, nose, forehead, neck, chest, wrist, fingers, ankle and toe etc. are denominated as follows:-

1. *Choti* is an ornament worn on the crown of the head.
2. *Borla* or *munch ka saz* is a round band worn on the forehead Its frills come down to ears on both sides.
3. *Boochani, dande, bali, jhumka* and *bunde* are popular ear ornaments. *Dande* is worn on the upper ear. The rest of the ornaments are worn in the lower ear.
4. *Nath* or *nathani, purali* (big nose pin) *koka* or *laung* (small nose pin) are nose ornaments. Nath is used by women at the time of marriage and other important ceremonies.
5. *Haar* (necklece), *jhalara* (twined with the silver or gold coated coins), *kanthi* (necklace made of golden ring) *galsari* (silver lockets of different designs), *Hansli* (horse-shoe shaped ornament) are important neck ornaments. *Haar* is made in different designs and is called *mohan mala, matar mala, jao mala* depending on the design. The neck ornaments are made of gold or silver.
6. *Choori* (bangle of gold, silver or alloy), *gajra* (wrist-let) *kangan* (bracelet) and *Hathphool* (silver rings worn on fingers with a *jhallar* or frill spread over the palm) are commonly used on lower arm. On the upper arm silver *bazuband* and *tadd* are worn.
7. *Mundri* or *anguthi* are ornaments of the fingers. These are generally made of gold. *Challa* made of silver is also worn. The thumb ring fitted with mirror is called *arsi*.
8. *Tagri* is an ornament worn loosely round the waist, *Guchchha* is attached with the *Naara*.
9. *Chhalla* and *chutki* or *bichua* are worn on the fingers of the foot.

10. *Newari, kari, chhoti, sutama, kare, chhail paati* and *paizeb* are worn on the leg. Men also wear ornaments like *kera* (a plain bracelet) *chhalla* (ring) and chain.

Entertainments

The people of rural Delhi spend their leisure in smoking *hooka, playing cards* or *chopar* and *singing raginis*. Their most important source of recreation are social and religious festivals. The other recreational activities include *swangs, bhajans, kirtans* and *raginis*. *Swang* is a kind of stage play enacted with the help of dances and songs. Mythological stories folktales provide the theme for these plays. During Dussehra days, *Ramlila* is the most popular entertainment for rural people.

Radio and transistors are a good source of entertainment for villagers. Television is also gradually making entry into the houses. Publicity van of the Delhi Administration and M.C.D. which tour the villages once in three months for showing documentary films are much sought after.

In the villages, *kartika* and *phalguna* are the months of games. *Chhajju panghha, kai panka, lahu kam kahuka, sussa kudan, ham sanla* or *gend khulia* (rural form of hockey) are some of the popular games of the villages. *Gher gharna, bora kuren, bhanda, deskra, lehloi, kani moosi, kankar, lapakna,* etc. are popular with the boys. *Kabaddi* and *kusti* (wrestling) are the most common games in the villages Gradually, games like football, volley-ball and cricket are also becoming popular in the villages.

Jugglers, snake charmers, puppeteers and acrobats also provide popular entertainment. Seasonal songs sung on *teej* and *holi* festivals also provide good entertainment. *Alha* and *ragini* are sung by the villagers in groups.

Fairs also provide recreation to the villagers. Some popular fairs of rural Delhi are described below: ·

Ganga toi is held every year on the eleventh day of the month of phalguna near *gushala* in Bawana village. Jagdamba Devi's fair is held twice in a year on the 6th day of the months of Ashvina and Chaitra near Narela and Singhu. Wrestling bouts add attraction to the fair. *Jharoda* fair is held twice a year at the *samadhi* of Sant Haridas at the time of Jagadamba Devi's fair. *Buddha Baba's fair* is held simultaneously at Boorhapoor and Isapur villages once in a year on the second day of Bhadra. *Nangal Thakran* fair is held once in a year at the samadhi of *Dodu Maldi*. Kalkaji fair is held on the day of Ram Navami. Another fair is held at the *samadhi* of Suraj Mal on 25th December every year. All these fairs have rural origins, but owing to fast urbanisation of Delhi their rural form is gradually changing to semi-urban.

Festivals hold an important place in the life of the people of rural Delhi. They provide a healthy change in their routine life and are a source of joy to all. Popular

festivals such as *holi, diwali, janamashtami, dussehra, Teej, Karwachauth, basant panchami, shivratri, bhaiyadooj Raskshabandhan,* are celebrated both in rural and urban Delhi. But some festivals such as *basora, guganvami, devuthani giras* etc are exclusive to rural Delhi.

Basora falls in the month of Chaitra (March-April) and literally means festival of stale bread. On the eve of the festival, all families prepare dalia (wheat porridge) for use on the next day. Next morning, they rise early, bathe and dress themselves. The women then go to various *chabutras* dedicated to the different *matas* to make offerings. The porridge, cooked on the preceding evening, is then offered to all the members of the family. *Guga Navami* is celebrated in the honour of an ancient saint named *Guga Pir,* who is believed to have had power over snakes. The festival falling in the month of Kartik, is mainly a festival of women. This is observed in order to awaken the gods who are supposed to be asleep from the ninth day in Asadh (June-July). The women keep fast on this day. Late in the evening, all women gather and beat upon brass utensils to wake up the gods After this, the fast is broken and special dishes prepared for the occasion are eaten.

Holy Bath

On certain days of the year, people throng to river Yamuna for a holy dip. On *Jaith Ka Dussehra,* tenth day of the month of *Jaith,* people take bath in the river. It is believed that Yamuna washes away the sins such as beating of oxen, killing of mice and other insects committed during the farming. The festival of *Ganga Yamuna Nahan,* which literally means bathing in the Ganga or Yamuna, is celebrated on the first full moon day after *Diwali.* On this day, people go to Yamuna and if possible to Ganga at Garmukteshwar for a bath. The whole month of Kartik (November-December) is considered auspicious for taking holy bath. The religious people go to Yamuna for bathing every day If the *amavas,* i.e the new moon day, falls on a monday, it is considered auspicious, and people celebrate it by taking a dip in Yamuna. Eclipse, lunar, or solar also provides an occasion for a bath in the river.

The above survey reveals that life of the people in Delhi villages has undergone a remarkable change in past forty years This change is reflected in dress patterns, food habits. customs, beliefs, traditions and social entertainments of the people. With the large influx of outsiders even the population content has changed substantially. The spread of education. growing industrialisation and proximity to metropolitan complex have contributed to the changing shape of rural Delhi.

CHAPTER III

AGRICULTURE, IRRIGATION AND ALLIED SERVICES

Historical Perspective

The geographical setting has influenced the development of agriculture and allied services in the Union Territory of Delhi. Further owing to its position as the capital city many outsiders have been coming and settling here. This naturally led to pressure on land and fast urbanisation.

The rural area of Delhi comprised 300 revenue villages of which 11 came into existance after 1951. But 3 villages have since been urbanised. This urbanisation of villages has reduced the agricultural land and adversely affected agricultural development.

At present, there are 258 villages in rural Delhi of which 243 are inhabited. To facilitate rural development entire rural Delhi has been divided into five blocks viz. Mehrauli, Kanjhawala, Shahdara, Alipur and Najafgarh.

Resource Base

The Delhi Territory has an area of 1485 sq. kms. In the north west and south it is bound by the state of Haryana and in the east, by Uttar Pradesh. The river Yamuna is the major source of its water supply. The altitude within the Territory ranges between 213 and 305 meters above sea level. The land comprises the plains, the ridge and the Yamuna flood plains. Himalayas on the north and the desert in the west influence the climate of Delhi. The monsoon season lasts for about three months (July to September) giving an average annual rainfall of 660 milimeters. The ridge and the river are two notable features of Delhi.

Soils

The soil of Delhi is alluvial and of medium fertility. It has been influenced by the flow of river Yamuna, the flood waters, the ridge and the winds from the south western direction. On the basis of soil formation, the territory is classified into four physiographic divisions:-

(i) Khadar or the new alluvium

(ii) Bangar or the old alluvium

(iii) Dabar or low lying area

(iv) Kohi or rocky area

This classification is based on the quality of soil. The southern portion near Mehrauli and Tughlaqabad being hilly is known as *kohi*. The low lying strip of land along the Yamuna is called *khadar*. The tract lying to the north of the ridge west of the Grand Trunk Road, is known as *bangar*. The depression near the township of Najafgarh has hard soil known as *dabar*. The ruins around Mehrauli are called *khandarat*.

Kohi Soil (rocky areas)

These soils comprise the quartzite or sandstone rocks of the Delhi ridge and local alluvium of the small streams. Aeolian deposits have also influenced the soils. Soil texture varies from sandy loam to clay loam Due to uneven topography the soils are subject to erosion and in the extreme areas deep gullies are formed. Calcium carbonate concretions are also found in the lower regions, usually below 60 inches and P.H. varies from 7.0 to 8.0. General fertility of the area is from poor to medium. The average nitrogen content of the cultivated area is about 0 035 per cent. Irrigation is difficult as the water level is low. Depending on the availability of irrigation. soils are suitable for a variety of field crops, vegetables and orchards.

Dabar Soil (low lying area)

The *dabar* tracts are generally flooded during the monsoons. Inadequate drainage leaves large areas under water, leading to the formation of saline-alkali soil. This tract comprises south-western and western portion of the Territory. The soils generally are sandy loam in texture. They are poor in organic matter and nitrogen, the average nitrogen content of cultivated area being 0.032 per cent. The four soil series identified in the tract are Najafgarh, Palam, Ladpur and Shikarpur.

Bangar Soil (old alluvium)

Bangar tracts form the north-western part of the Territory Here due to poor drainage, rain water does not find outlet and so large areas are subjected to inundation. Most of the land is irrigated by canals and wells. Canal irrigated areas are characterised by high water level. Patches of saline-alkaline soil are found in cultivated areas. In fact, large areas have gone out of cultivation due to high salinity. Usually the P.H. value increases with depth. The soils are generally fertile with high moisture. The average nitrogen content of the cultivated area is 0.045 per cent. Variety of crops can be grown on these soils. The five soil series identified in this area include Alipur, Gheora, Karala, Ladpur and Najafgarh.

Khadar Soil New (alluvium)

This type of soil shows distinct stratification, being finer on surface and coarser below. It is usually silt to sandy loam. Clay content varies from 13 to 17 per cent but in lower reaches it is below ten per cent. The structure is mainly single grain or weakly developed granular. Irregularly distributed calcium carbonate ranges from 1 to 4 per cent. The PH value varies from 8.0 to 8.8 and soil goes more alkaline with depth. It is generally fertile and suitable for a variety of crops. The four soil series representing the *Khadar* include Balla, Shahdara, Gokalpur and Madanpur. The Alipur series represents the transitional zone between the recent and the old alluvium

Trends in Agricultural Development

Of the total area of 1485 sq. km. about 1039 sq. km. is rural and 446 sq. km. urban. The land available for cultivation is limited. The spread of urbanisation is further reducing it. The area under cultivation decreased from 90,882 hectares in 1950-51 to 80,512 hectares in 1970-71 to 69,392 hectares in 1979-80 and to 62,653 hectares in 1983-84. (see Appendix-I) The production of food grains has increased from 27,447 tonnes in 1951-52 to 60,133 tonnes in 1965-66 to 95,802 tonnes in 1968-69 and to 11,9610 tonnes in 1971-72. Floods in 1977 and 1978 and drought in 1979 adversely affected the production. Barring these years the production has been on increase. Employment of modern techniques has helped this increase. The production of food grain in 1982-83 was 152,837 metric tonnes.

Efforts have been made to bring more and more areas under irrigation. Consequently irrigated area increased progressively from 32,158 hectares to 46,147 hectares in 1971-72 and to 53,000 hectares in 1977-780. But it decreased to 50,866 hectares in 1983-84. As a result of irrigation expansion, the area yielding more than one crop increased from 22.79 thousand hectares in 1968-69 to 42.10 thousand hectares in 1971-72. However, it decreased from 31.0 thousand hectares in 1977-78 to 26.45 thousand hectares in 1983-84 mainly because of urbanisation. The rural population constitutes 10 per cent of the total population of the Territory.

Owing to rapid urbanisation, rural Delhi and its agricultural population is of little consequence to Delhi's economy. The contribution of agriculture and allied activities amounted to a little more than 18 per cent of its income in 1982-83 as against 50 per cent for the country as a whole. According to the estimates published by the Bureau of Economics and Statistics, Delhi Administration, the contribution of agriculture and allied services to the total income of Delhi was only Rs. 11,551 lakhs as indicated in the following table:-

Table-1

Net income of Delhi (in lakh) from agriculture and allied services

Year	Net income agr. & animal husbandry	Forestry & fisheries	State Income	Share to the total income (per cent)
1960–61	1220	3	17,456	2.32
1965-66	1767	5	28,616	3.80
1970–71	3248	7	52,847	7.03
1971–72	3600	9	59,789	7.95
1972–73	3700	9	66.449	8.83
1973–74	4879	11	76,882	10.22
1974-75	6350	17	99.968	13.29
1975-76	5445	22	109,250	14.52
1976–77	6087	25	114,517	15.22
1977-78	6517	33	126,411	16.82
1980 81	8624	111	176,195	20.17
1982 83	11551	200	220,367	18.75

According to 1971 census out of the total labour force of 4.51 lakhs only 0.47 lakhs were engaged in agriculture. The number of workers engaged in mining, quarrying, live-stock, forestry, fishing, hunting, plantation, orchards etc. was 13,391. The female labour constituted 5.2 per cent of the total agricultural labour. (For details see general economics tables 1971 and 1981, Directorate of Census Operations)

Size of Holdings

The number of small holdings is gradually increasing in rural Delhi. The number of cultivators with the smallest size of holdings (upto 0 4 hectares) increased from 9.2 per cent in 1964-65 to 14.7 per cent in 1968–69. In the highest size of holdings (above 8 hectares) the number of cultivators fell from 16.9 to 10.1 per cent during the same period (see Appendix. II)

There has been substantial increase in the number of holdings under the very small and small categories in 1976-77 as compared to 1964-65 and 1970–71. The large and very large holdings registered a sharp decline.

Table-2

Percentage of area under different holdings

	Size of holding	64–65	66–67	68–69	70–71	76–77
1.	Upto 1 hectare (very small)	1.14	2.61	2.02	43.32	45.72
2.	1–2 hectares (small)	3.48	5.96	5.40	18.03	17.15
3.	2–4 hectares (medium)	17.60	24.66	20.20	18.23	18.49
4.	4–8 hectares (large)	31.62	36.82	39.88	10.84	12.50
5.	Above 8 hectares	46.13	29.95	32.49	9.58	6.14

(Office of the Deputy Commissioner, Delhi)

Out of the total area in which agricultural census was conducted in 1976–77. 71,596 hectares i.e. 93.9 per cent, spread over 28,400 holdings, was wholly owned and self cultivated. In the 1970–71 census, this area was 70,590 hectares i.e. 80.7 per cent spread over 25,927 holdings. 9311 hectares distributed in 1,697 holdings was partly owned by the holders themselves and partly given on rent. 4,333 holdings constituting 13.6 per cent of the total were held on rent. These holdings comprised 7.559 hectares or 8.6 percent of the total area. The area of partly owned and partly leased holdings declined from 9,311 hectares in 1970–71 to 940 hectares in 1976–77. The number of holdings declined from 1,697 to 199 during the same period. 28,007 holdings, i.e. 87 per cent, covering an area of 38,571 hectares are below 5 hectares; 14 2 per cent of the area i.e. 10,886 hectares is below 10.2 hectares in size and distributed in 859 holdings.

Cultivation in Delhi is carried out individually or jointly. In 1970–71, 50.4 per cent were joint holdings and 49.6 per cent individual holdings. The majority of joint holdings fell in the size group below 0.5 hectares. 13.3 per cent of such holdings were, however, in the size group of 5–10 hectares. The holdings of 5–10 and 10–20 hectares cover nearly half of the total area under joint holdings. Majority of individual holdings were below 0.5 hectares making 31.4 per cent of the total individual holdings. The maximum area under individual holdings was in 5–10 hectares group. There were very few holdings above 30 hectares (for detail see Appendix-III).

Of late, there has been a marked shift from joint to individual holdings. The Agricultural Census 1976-77 reveals that percentage of individual holdings had increased from 49.6 to 56.7 while that of joint holdings had decreased from 50.4 to 43.3. The joint holdings, 13,987 in number, covered 42,605 hectares i.e. 56.0 per cent of the total, whereas individual holdings 18,301 in number covered 33,480 hectares i.e. 44.0 per cent of the total..

In 1970–71, 46 7 per cent of the area under food crops was covered by holdings under 5 hectares, 46.3 per cent by holdings between 5 to 20 hectares and 7 per cent by holdings above 20 hectares. By 1977, holdings under 5 hectares increased to 51 per cent as shown in the following table:-

Table-3

Holdings sizewise, precentage of area under food crops

Holdings size (hectraes)	Cereals		Pulses		Vegetables		Fruits		Others including Sugarcane		Total	
	70-71	76-77	70-71	76-77	70-71	76-77	70-71	76-77	70-71	76-77	70-71	76-77
Upto 5	46.7	51.44	47.1	46.85	46.1	46.22	47.8	60.37	42.5	44.79	46.7	51.02
5 to 20	46.3	43.55	45.0	47.26	45.9	50.76	44.7	32.20	51.6	50.88	46.2	44.00
20 and above	7.0	5.00	7.0	5.89	8.0	3.01	7.5	7.42	5.9	4.32	7.1	4.97
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.0	100.0	100.0

(Deputy Commissioner's Office, Delhi.)

In 1977 out of a total of 4,6515 hectares under food crops, holdings between 5 to 20 hectares accounted for 40,118 hectares and holdings above 20 hectares, 4,536 hectares. Data reveal that big cultivators showed more interest in vegetable crops than in cereals. The area under vegetables covered by 5-20 hectares size group was 1,845 hectares while it was 1,630 hectares in the size group upto 5 hectares. The area under vegetables in the size group of 20 hectares and above was 110 hectares. The total area under cereals was 81,910 hectares out of which 42,140 hectares was covered by holdings upto 5 hectares. 35,672 hectares, by holdings of 5-20 hectares and only 4,098 hectares by those above 20 hectares. Pulses having total area of 4,266 hectares covered 1,998 hectares in the holdings up to 5 hectares, 2016 hectares of 5-20 hectares holdings and 252 hectares in the holdings above 20 hectares. The holdings upto 5 hectares had an area of 343 hectares. This area was only 183 hectares in holdings of 5-20 hectares and only 42.20 hectares in the holdings above 20 hectares out of a total of 569 hectares covered under fruits.

In 1970-71 area under non-food crops covered by holdings under 5 hectares was 47.1 per cent, by holdings of 5 to 20 hectares, 45.5 per cent and by holdings above 20 hectares 7.4 per cent. Briefly the first two categories registered an increase whereas the last category showed a decline as shown in the table:-

Table-4

Percentage area under non food crops in different size holdings

Holdings size (hectares)	Percentage of area under non food crops: Oil Seeds		Fibers		Fodders		Others		Total	
	1970-71	76-77	70-71	76-77	70-71	76-77	70-71	76-77	70-71	76-77
Upto 5	41 63	54.51	39.22	46 55	47.30	51.74	47.19	75.88	47.10	51.94
5 to 20	40.49	37.91	55 42	52.00	45.39	42.80	45 43	23.76	45.55	42.75
20 and above	17.88	7.58	5.36	1.45	7.21	5.46	7.38	0.36	7.35	5.31
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(Deputy Commissioner's office, Delhi.)

Crops

The natural factors, like rainfall and soil conditions, determine the cropping pattern in a particular region. Technical factors like irrigation, improved seeds and fertilisers also play a significant role in determining cultivators preference of crops. The introduction of multiple cropping system also has a bearing on the choice of crops.

There has been gradual decline in the net sown area through the years. However, area brought under multiple cropping increased from 19.8 per cent in 1950–51 to 38.5 per cent in 1969–70 and further to 44.9 per cent in 1977-78. The cultivators have switched over to intensified agriculture due to better irrigation facilities.

Important crops grown in Delhi include wheat, gram, bajra, jawar, rice and sugarcane. 80 per cent of the total cropped area grows food grains. 40 per cent of this grows wheat alone. Fruits, vegetables and fodder etc. cover 20 per cent. Distribution of area under various crops is given in the following table:

Table-5

Distribution of area under different crops

	Crops	1966–67	1967-68	1968–69	1969–70	1970–71	1976–77
1.	Rice	1.4	1.7	3.1	2.5	1.83	2.0
2.	Jawar	9.6	10.1	8.0	7.2	8.64	4.71
3.	Bajra	16.0	17.3	19.1	18.8	18.38	18.11
4.	Maize	1.4	1.4	1.4	1.2	1.20	0.71
5.	Wheat	30.8	32.6	41.8	40.5	34.89	51.27
6.	Barley	4.6	5.3	2.5	2.5	1.53	1.81
7.	Other cereals	1.5	0.5	1.1	2.0	0.02	1.53
8.	Gram	10.6	13.8	4.6	5.2	8.08	3.13
9.	Pulses	3.5	3.2	3.2	3.2	2.72	1.05
10.	Sugarcane	3.0	1.7	2.3	2.2	1.50	0.37
11.	Chillies	0.3	0.4	0.1	0.2	—	0.16
12.	Fruits	1.0	1.4	1.3	1.4	0.76	0.56
13.	Potatoes	0.2	0.2	0.3	0.3	0.27	0.26
14.	Vegetables	5.5	2.5	3.9	2.9	3.76	3.30
15.	Other food-crops	0.6	neg	neg	0.1	—	—
16.	Oil seeds	0.8	0.9	0.6	0.3	0.25	0.23
17.	Cotton	0.2	0.2	0.3	0.3	0.19	0.96
18.	Tobacco	0.1	0.1	0.1	0.1	—	—
19.	Fodder	8.9	5.7	5.2	7.2	7.42	10.29
20.	Other nonfood	neg	1.0	1.1	1.5	8.56	0.14
	Total	100.00	100.00	100.00	100.00	100.00	100.00

(Deputy Commissioner's Office, Delhi.)

The area under wheat has almost doubled during the last 25 years where as the gram has lost considerably. Thus the loss of gram has been a gain for the wheat. Area under barley and sugarcane has also suffered a substantial loss. Cotton and potatoes did not show any improvement in area. The area under bajra increased substantially between 1950 and 1971 but there after it has shown a decline. Jawar has also suffered a set back. Rice, however, improved from a negligible 195 hectares in 1950–51 to 3.7 thousand hectares in 1977-78. (for details see Statistical Hand Book, Bureau of Economics and Statistics, 1985)

From productivity point of view, we find significant changes as indicated in the following table:

Table-6

Area, Production, and yield of principal crops in Delhi Area 000 hectares, Production 000 tonnes Yield: Kgm. per hectare (Statistical Hand Book)

Crops	1950–51	1955–56	1960–61	1965–66	1970–71	1975-76	1977-78	1983–84
Wheat								
Area	22.6	23.5	28.0	29.7	45.5	47.2	43.2	
Production	14.2	16.3	28.4	40.1	87 9	98.3	115.9	
Yield	628	574	1,018	1,350	1,932	2,083	2,684	2,565
Gram								
Area	21.0	33.6	24.6	11.6	9.9	5.6	3.5	
Production	2.0	2.0	18.3	5.9	5.7	5.0	3.8	
Yield	96	61	741	710	576	903	1,077	951
Bajra								
Area	16.5	21.8	15.4	13.4	23.6	18.9	9.5	
Production	9.1	10 2	7.1	9.1	23.2	7.3	2.7	
Yield	471	465	463	467	980	1,215	1,439	835
Maize								
Area	0.8	1.2	1.1	0.8	1.2	0.3	0.4	
Production	@	@	10 0	0.5	0.7	0.4	0.2	
Yield	628	628	837	852	1,207	383	206	614
Barley								
Area	5.7	4.7	4.5	3.3	2.1	2.4	1.4	
Production	1.0	1.0	1.0	0 5	1.9	2.9	2.0	
Yield	179	210	229	194	942	1,215	1,439	1244
Total area of above items	66.9	89.8	73.7	62.8	82.3	74.4	58.0	
Gross cropped area	112	130	113	100.0	110	119	100	
Percentage of total area of above crops to gross cropped area	68.8	68.8	64.9	62.8	74 5	62.2	57.7	

Production of wheat has increased more than 4 times during the last 27 years. Average yield of wheat per hectare has improved from 628 kilograms in 1950–51 to 1,932 kilograms in 1970-71 and 2,684 kilograme in 1977-78. In the case of gram, average yield increased from 96 kilograms per hectare in 1950–51 to 1,077 kilograms per hectare in 1977-78. Bajra also picked up. Barley also improved substantially. However, maize production declined by about one third. The average yield of important crops in Delhi is much higher than all-India level is indicated in the following table:

Table - 7

Average yield of important food crops in India and Delhi (1970-71)

(kg. per hectare)

Crops	India	Delhi
Wheat	1,299	1,932
Bajra	620	983
Barley	1,103	905

Wheat production increased from 14,224 metric tones in 1950–51 to 28.448 metric tones in 1960-61 and 1,15,957 metric tones in 1977-78 but it declined to 1,13,797 metric tones in 1983-84. However, bajra and jawar suffered a setback. The yield of rice per hectare increased from 623 kgs. in 1955-56 to 992 kgs. in 1970-71 and 1,633 kgs. in 1977-78. However, production of sugarcane per hectare declined from 1,695 kg. in 1955-56 to 335 kg. in 1970-71 and 538 kg in 1977-78. Cotton production has also not been encouraging.

Wheat

Earlier, *lal, safed* and 5912 *munda* (beardless) varieties of wheat were grown in Delhi. These have been gradually replaced by high yielding varieties like *Kalyan Sona*, s-308 and *sonalika* since 1968. Cultivated area under high yielding varieties increased from 13 thousand hectares in 1966-67 to 27 thousand hectares in 1968-69, and 37 thousand hectares in 1970–71. The area under wheat cultivation in 1977–78 was 43 thousand hectares. It increased to 44 thousand hectares in 1983-84.

The use of fertilisers in wheat cultivation has now become common owing to the expansion of irrigation facilities. The consumption of fertilisers increased from 3,392 metric tones of nitrogen in 1965-66 to 12.593 metric tons in 1970–71 and 14,090 metric tones in 1977-78. The share of wheat in the total fertiliser consumption increased from 48 per cent in 1965-66 to 66 per cent in 1970-71 and more than 70 per cent in

1977-78. Of the total area under wheat about 70 per cent was fertilised by nitrogenous fertilisers. Of the total phosphate fertiliser consumed, wheat accounted for 78 per cent in 1970–71 as against 40 per cent in 1965–66. In terms of quality, this was nearly three times more when compared to 1970–71 About 40 per cent wheat area benefitted by farm-yard manure.

Gram

Gram is generally grown along with barley or wheat, the mixed crops termed as *bejhar* and *gochani* respectively. It is an important crop in the *barani* tracts. The area under gram has declined appreciably during the last few years.

Bajra

Bajra is one of the important kharif crops It is mainly grown on *barani* lands. Bajra requires comparatively less attention in terms of management.

Before 1968–69 only *desi* variety of bajra was grown but afterwards hybrid varieties such as Hybrid-1, Hybrid-3 and Hybrid-4 became popular. The yield of these varieties is 2 to 3 times that of the *desi*. Bajra, sown in July takes three to four months to mature and harvesting takes place during October.

Over the years, the percentage of fertilisers consumed by bajra has declined considerably. However, the quantity consumed has remained almost the same. Area covered by nitrogenous fertilisers has however, continuously increased Next to wheat, bajra shares the highest quantity of total farm yard manure. The production of bajra has decreased gradually after 1971

Maize

The area under maize is small. It is grown on well drained and light soils. *Desi* and hybrid varieties of maize are grown in Delhi. *Desi* has now been replaced by hybrid varieties such as Ganga-1. Ganga-3 and Ganga-5. A few composite varieties viz. Jawahar, Kisan, Vijay and Vikram have also been released for use Of these, Vijay and Vikram have been found better suited to local conditions The maize is grown between mid-June and mid-July and harvested after 100 to 110 days. The area under this crop is gradually declining.

Sugarcane

At one time sugarcane was widely grown in Delhi but gradually the area under it has declined. As against 5,512 hectares in 1960-61, it came down to 1,961 hectares in 1970–71 and 431 hectares in 1977-78. The production declined from 7,761 metric tons in 1960–61 to 1,045 metric tons in 1970–71 and further to 232 metric tons in 1977-78. The yield per hectare came down to 538 kg. in 1977–78. from 1408 Kg. in 1960–61. It has remained constant since 1965–66 at about 500 kg. per hectare.

Major and subsidiary crops

Fruits

Mango—The two important mango varieties of Delhi are Dushehri and Neelum. Neelum is regular in bearing fruits. Dwarf is more suited for kitchen gardening. A few promising new mango hybrids viz. Neelum X, Chausa, Dushehri X, Totapuri and Neelum X Totapuri, have also been developed at the Indian Agriculture Research Institute, New Delhi. A new, convenient and cheap method called veneer grafting for propagating mango trees has been perfected by the above Institute.

Guava—Allahabad Safeda and Lucknow-49 are the guava varieties considered suitable for the Delhi region. These can be propagated either by veneer grafting, air layering or stooling.

Grapes—Pusa Seedless, the beauty seedless and cardinal are the recommended grape varieties for Delhi. The beauty seedless and cardinal can be raised on head system. 75 PPM of Gibberelic acid on clusters of berry shatter stage increases the berry weight by 75 to 80 per cent.

Grape-fruit: Forster, Dimean and March varieties are considered best suited or cultivaton in Delhi.

Straw Berry: Pusa early dwarf is the recommended variety for cultivation in Delhi. An application of Gibberelic acid 75 PPM in November increases yield by 200 per cent.

In 1970–71 the area under fruits was 978 hectares, 723 hectares irrigated and 255 hectares unirrigated. It declined to 570 hectares during 1976–77. The details are given in the following table:

Table 7A

Area covered by fruits in the Union Territory of Delhi (in hectares)

Size Class (hectares)	1970–71		1976–77		
	Irrigated	Unirrigated	Irrigated	Unirrigated	Total
Below 0–5	84 01	3.25	24.59	9.68	34.27
0.5–1.0	23.50	39.51	54.75	23.87	78.62
1 0–2.0	57.25	38.51	51.37	15.93	67.80
2.0–3.0	33.01	46.35	46.27	24.81	71.08
3.0–4.0	44.50	12.06	36.20	1.93	38.13
4.0–5.0	71 63	12.95	52.91	0.98	53.89
5.0–10.0	221.56	64.20	140.38	8.66	149.04
10.0–20.0	138.61	13.31	32.74	2.33	35.07
20.0–30.0	26 68	25.45	—	—	—
30.0–40.0	3.53	—	3.22	—	3.22
40.0–50.0	—	—	2.54	—	2.54
50.0–above	19.12	—	35.44	1.00	36.44
Total	723.40	255.50	480.41	89.19	570.10

(Deputy Commissioner's Office, Delhi.)

Vegetables

Tomato, brinjal, water melon, bottle guard, cauliflower, radish, cabbage, onion etc. are important vegetable types of Delhi. The details of vegetable cultivation are given in the following table:

Table-8

Area under vegetables in Delhi

(In hectares)

Vegetables	1970–71 Irrigated	1970–71 Unirrigated	1970–71 Total	1976–77 Irrigated	1976–77 Unirrigated	1976–77 Total
1. Potatoes	312.75	32.50	345.25	248.81	15.53	264.34
2. Onion	113.95	0.90	114.85	86.07	0.75	86.82
3. Other kharif vegetables	1942.99	236.41	2179.40	1411.78	122.39	1534.17
4. Other rabi vegetables	925.85	24.48	950.33	630.32	13.85	644.17
5. Summer vegetables	1149.15	410.55	1559.70	890.16	214.78	1104.94
Total	4444.69	704.84	5149.55	3267.14	367.30	3634 44

(Deputy Commissioner's Office, Delhi)

The area under vegetable production has decreased considerably over the years. The total area covered under vegetables in 1970–71 was 5194 hectares. In 1976–77 it came down to 3634 hectares.

Change in the Cropping Pattern (1950–51 to 1964–65)

As a result of various development plans and other factors a variation in the cropping pattern in Delhi had been noticed. The following table shows the area under different crops and its percentage to the total sown area:

Table-9

Area under various crops and its percentage to total area sown

	Name of the crop	1950–51 percentage to total area sown	1956–57 Percentage to total area sown	1961–62 Percentage to total area sown	1964–65 Percentage to total area sown
1.	Cereals & Millets	54.68	54.06(–)0.62	58.25(+)6.57	61.89(+)7.21
2.	Gram & Pulses	21.58	26.47(+)4.89	23.02(+)1.44	19.52(–)2.06
3.	Total food grains (2)+(2)	76.26	80.53(+)4.27	81.27(+)5.01	81.41(+)5.15
4	Misc. Food crops	6.12	7.96(+)1.84	9.84(+)3.72	8.16(+)2.04
5.	Total Food Crops (3)+(4)	82.38	88.49(+)6.11	91.11(+)8.73	89.57(+)7.19
6.	Total Non-Food Crops	17.63	11.49(–)6.14	8.89(–)8.74 (–)0.01	10.44(–)7.19
7.	Total all	100.00	99.98(–)0.03	100.00	100.00

Note:–Percentage is measured with reference to the position in 1950–51

There is a definite shift in the choice of the cultivators for food crops. This was at the cost of some other crops such as gram and pulses.

Rotation of crops

The farmers of Delhi raise two crops in a year. Vegetable growers even raise three crops in a year. The cropping sequence is generally as follows:

(a) **Two crops in one year**

Bajra -- Wheat

Maize -- Wheat

Jawar fodder--Wheat

Jawar fodder—Berseem or oats

Early cauliflower—Wheat

Jawar fodder—Cauliflower

(b) **Two or three vegetable crops**

Early cucurbits—Cauliflower—Onion (Mid season)

Maize crop	**Cauliflower**	**Onion**
Kabri	**Radish**	**Onion**
Early cucurbits—		Tomato
Early cucurbits—		late cauliflower
Early cucurbits—		Potato
Early cucrbits—		Bhindi
Kharif vegetables—		Peas green

(c) **The progressive cultivators raise three crops in a year**

(1) Bajra	Wheat	Moong
(2) Maize	Wheat	Moong
(3) Paddy	Wheat	Moong

(d) **In the rain fed areas the common crop sequence is as follows** :

(1) Fallow	Wheat
(2) Bajra	Fallow
(3) Bajra	Gram
(4) Fallow	Gram

Intensive vegetable production programme

This programme popularly known as 'Crash Programme' was started in December, 1964 with a view to bring additional area under vegetable cultivation in rural as well as urban Delhi. During 1965-66 as against the target of 17,500 acres, 20,889 acres were brought under vegetables. 18,000 kg. of improved vegetable seeds were produced and supplied to vegetable growers. In addition to this 9,90,000 vegetable seedlings and 32,000 handy packets, fertilisers and insecticides were distributed to kitchen gardeners. The kitchen garden programme met with great success both in rural and urban areas. During a special drive organised in October 1965, 44 squads consisting of 220 officials made house to house contact in 44 localities for popularising this programme. Papaya seedlings, procured from Indian Agricultural Research Institute, National Seeds Corporation and Progammy Orchard-cum-Nursery of Delhi Administration, were sold to the kitchen gardeners in Delhi. The tempo increased in the succeeding years. The farmers evinced great interest in these crops and varieties which were responsive to fertilisers. Consequently, the vegetable production increased from 2,95,700 tons in 1973-74 to 3,45,240 tons in 1976-77. It was proposed to increase vegetable production to 4,20,000 tones by 1984-85.

Horticulture (Sixth Plan Programme)

In 1979-80 Planning Commission suggested an integrated horticulture & vegetable development programme covering the following aspects :

1. Orchard development
2. Vegetable development
3. Preservation of fruits & vegetables

Keeping this in view, an amount of Rs. 6 lakhs was utilised in 1979–80 and an outlay of Rs. 23,521 lakhs was approved for 1980–81. The integrated scheme comprised the following:–

(i) Improvement in technical information
(ii) Supply of inputs etc.
(iii) Supply of sludge, manure and trucks
(vi) Widening of crop health service
(v) Opening of sale counters

The main objective of this scheme is to increase the area under orchards in Delhi. In 1976–77, a nursery was set up at Hauz Rani to supply quality fruit plants to interested people. Subsidy is also given to the farmers to encourage horticulture activities.

Vegetable Development

The vegetables produced in Delhi fall much below the demand. Efforts are, therefore, being made to increase production by putting additional area under vegetable cultivation During the last 13 years, vegetable cultivation has spread to almost all villages. But vegetable production involves, higher expenditure, more labour, natural calamities and vegaries of marketing. More concentrated efforts are therefore, required in extension activities, arrangement of inputs and improvement of marketing facilities so that cultivators find vegetable cultivation a dependable source of income. During the sixth plan it was envisaged to increase the existing area of 26,000 hectares by 8,000 hectares to augment vegetable cultivation from 3,14,640 tones in 1977-78 to 4,20,3000 tones in 1982-83. The following activities were to be intensified to achieve the target:

I. Extension services
(a) Technical assistance to vegetable growers
(b) Popularisation of potato and onion cultivation
(c) Intensification of plant protection measures.

II. Arrangement of inputs

III. Supply of sludge.

Preservation of fruits and vegetables

Under this scheme two mobile Training Centres have been set up to train women in the technique of preservation. Under the integrated horticulture and vegetable development programme the following staff has been sanctioned:

For supply of specialised technical information

I.	Deputy Director, Horticulture	One
	Horticulturist (Block level)	Five
	Horticulture Assistant	Ten
	Driver	Five

II. For intensification of crop health service :

Plant Protection Assistant	Five
Field-man	Five

III. For setting up sale counters:

Requirements Manager	Five
Salesman-cum-Cashier	Five
Store-keeper	Five
Beldar	Ten

Seeds

In view of limited area for cultivation, the agricultural production can be increased only by the use of better seeds, irrigation and fertilisers. During 1965-66 a scheme for seed certification was approved under the Seed Multiplication and Distribution Scheme of the Department. Following quantity of improved seeds were made available to the farmers at the beginning of the programme:

Crop	*Quantity of seed distributed, in quintals*	
	1964-65	1965-66
Rabi seeds	2033	4075
Kharif seeds	3131	1030
Vegetable seeds	276	173

During 1966-67 following quantities of improved seeds were distributed to the cultivators:

1.	Jawar	1,200 quintals
2.	H. Maize	26 quintals
3.	H. Bajra	52 quintals
4.	Paddy	16 quintals
5.	Ground Nut	25 quintals
6.	Wheat (Maxican)	800 quintals

During the Fourth Plan an outlay of Rs. 6 lakhs was provided for the implementation of Seeds Act, 1966. The scheme aimed to standardise the quality seeds in the market and to provide knowhow to the farmers about them in accordance with the Act. As many as 6,000 seed samples were collected for testing For the improvement of 3 seed multiplication farms an outlay of Rs. 7 lakhs was provided in the Fifth Plan. In the Sixth Plan, an outlay of Rs. 6 lakhs had been provided. The objective was to improve the working of two seed farms (earlier there were 3 farms) at Alipur and Hauz Rani.

The seed production programme has suffered a set back due to transfer of Nangloi and Adchini farms to the D.D.A. The Adchini farm was producing vegetable seeds.

To meet the increasing demand for hybrid crop seeds it was proposed to set up a 100 acre seeds farm during Sixth Five Year Plan.

The use of high yielding varieties has been quite satisfactory. According to an assessment survey conducted during 1968–69, the percentage of cultivators utilising wheat seed from sources other than their own increased from 40 per cent in 1967–68 to 80 per cent in 1968–69. This increase was as high as 96 per cent in the case of large and very large holdings. During 1968–69, a cultivator arranged on the average 107 kg. of wheat seed from outside agencies as against 190 kg. and 147 kg. during 1964–65 and 1967–68 respectively. The cultivator had obviously started using quality seeds multiplied by him during the previous years. The decline is more perceptible in respect of *Kharif* crops. The area covered under high yielding varieties since 1966–67 is given below:

Table - 10

Area covered under High Yielding Varieties

(Area in hectares)

Year	Paddy	Wheat	Maize	Bajra
1966–67	65	1,299	162	304
1967–68	177	5,090	219	3,373
1968–69	1,694	27,259	291	4,439
1969–70	2,700	30,500	700	9,000
1970–71	2,100	37,880	600	13,600
1974–75	1,650	43,410	540	14,830
1975–76	1,670	42,150	490	13,430
1976–77	2,130	44,810	870	12,740
1977–78	3,480	44,830	850	10,560
1978-79	3,720	49,060	540	7,860
1979–80	5,120	46,100	520	9,500
1980–81	3,000	49,000	500	9,500
1984–85	2,700	48,000	400	8,400

(Development Commissioner's Office, Delhi Administration)

As compared with the neighbouring states, the coverage of wheat and *Bajra* under H.Y.V. Programme in Delhi was quite high during 1969-70, as is evident from the following table:

Table - 11

State	Wheat 1969–70	Bajra 1969–70
Delhi	69	44
Haryana	43	14
Punjab	65	57
Uttar Pradesh	30	2
Rajasthan	23	4

Fertilisers

Chemical fertiliser is an important input for increasing crop production. The progress in the use of fertilisers, such as nitrogen (N), phosphatic (P_2O_5) and potasic (K_2O), has been spectacular as is evident from the table below:

Table - 12

Distribution of Fertilisers in Delhi (in tons)

Year	Nitrogen	Phosphatic	Potassic	Total
1963–64	880	N.A.	N.A.	N.A.
1964–65	1,847	420	N.A.	2267
1965–66	3,392	616	N.A.	4008
1966–67	4,546	520	N.A.	5066
1967–68	6,496	961	42	7499
1968–69	10,470	1,555	79	12,104
1969–70	10,752	1,232	126	12,110
1970–71	12,588	2,069	241	14,898
1971–72	11,695	2,159	346	14,200
1973–74	12,501	2,958	225	15,684
1974–75	8,666	2,533	148	11,347
1975–76	13,949	3,664	156	17,769
1976–77	14,507	5,412	292	20,211
1977–78	14,090	5,590	411	20,091
1980–81	25,000	3,600	521	29,121
1981–82	4,710	960	320	5,990
1984–85	4,500	1,050	500	6,050

The table indicates that distribution of fertilisers increased progressively from 2,267 tons in 1964-65 to 14,898 tons in 1970–71. The distribution nearly doubled between 1968 and 1971. It touched an all time high record of 29,121 tons in 1980–81. Before 1963–64, Delhi was far behind the other neighbouring states in fertiliser consumption. By 1969–70, fertiliser consumption in Delhi became more or less equal to that in Punjab.

Table -13

Distribution of Fertilisers (per hectare) in Delhi and Neighbouring States (1969-70)

States	N 1969–70	P-205 1969–70	K-20 1969–70
Haryana	7.49	0.35	0.24
Jammu & Kashmir	1.27	—	1.27
Punjab	26.18	2.30	2.21
Rajasthan	0.99	0.51	0.05
Uttar Pradesh	4.86	0.51	0.70
Delhi	28.41	0.59	0.36
Himachal Pradesh	3.23	0.07	0.12

(Fertiliser Statistics, Fertilisers Association of India, New Delhi.)

During *rabi* harvest the number of cultivators applying chemical fertilisers with or without farm yard manure went up from 36 per cent in 1964–65 to 69 per cent in 1968–69, reflecting an increase of 92 per cent. The use of farm yard manure in Delhi is more popular during the *kharif* as compared to the *rabi* season. The cropwise consumption of compost and chemical fertilisers is given in the following table (for details see appx. IV).

Table - 14

Quantity consumed per crop (percentage of the total)

Crop	F.Y.M. 1969–70	Nitrogenous 1969–70	Phosphatic 1969–70
Bajra	24	10	5
Maize	2	1	3
Wheat	41	69	81
Gram	1	8	1
Vegetable	9	4	2
Other foodgrains	10	4	7
Other crops	13	12	4
Total	100	100	100

Sludge Manure

The use of organic manure and compost along with fertilisers helps to maintain the water retentive capacity of the soil. Being near to metropolis, Delhi farmers get urban compost and sludge cheap. In 1967-68, about 113 thousand tons of rural compost and 75 thousand tons of urban compost was used by the farmers. The sludge manure amounted to 41,538 M.Tons in 1970–71, 33,549 M.Tons in 1976–77 and 40,000 M.Tons in 1984–85.

At the end of the Fourth Plan about 32,000 tons of sludge was being produced in the Territory annually. It was then proposed to increase it to 1 lakh tons per annum. The Delhi Municipal Corporation and Delhi Administration have set up a mechanical compost plant with a capacity of 400 tons per day. An outlay of Rs. 200 lakhs has been made during the seventh plan to start another plant. It will process 200 tons of garbage per day and will produce 30,000 tons of compost per year by 1990.

Plant Protection Measures

To save the crops from harmful germs and insects, the cultivators use pesticides. The increased use of fertilisers and hybrid seeds have added to the problem of plant protection as the high yielding varieties of crops are more vulnerable to disease and pest attack. In 1968-69 a survey revealed maize and *bajra* to be infected by dowing mildew.

Smut and zonate leaf pests were also observed in *bajra*. In paddy crops, bacterial incidence of tungro-like virus disease, was noticed. Wheat crop was found affected by seedling bright and root rot diseases. Insects and pests chilo zonellus and marsamia trapezalia affected maize and in paddy gundhi bug (leptocorixa varicornis) was noticed. The sugarcane pest pyrilla also infected the paddy crop. Mung plants were found affected by chrotagonus. Pesticides are distributed to the cultivators through the Blocks. Headquarter Plant Protection Cell assists them with technical advice and equipment. In 1965–66, 26 tons of pesticides were distributed to the cultivators. This increased to 68 tons by 1970–71.

There are mobile plant protection units for sparaying and dusting the crops with pesticides. The area covered by these measures has increased from 9 thousand hectares in 1964–65 to 147 thousand hectares in 1968–69 and to 243 thousand hectares in 1973-74. In 1978–79, about 186 thousand hectares and in 1984-85 about 225 thousand hectares were covered under plant protection scheme. The target is to cover 1,249 thousand hectares during the Seventh Plan as against 190 thousand hectares during the Sixth Plan. The treatment of stored grain increased from 1 thousand quintals in 1964-65 to 204 thousand quintals in 1968–69. The plant protection activity during the sixties is reflected in the following table:

Table - 15

Grain and Plant Protection in Sixties

Items	Unit	1964–65	1965–66	1966–67	1967–68	1968–69
1. Control of pests and diseases	(000 Hec)	9	72	75	116	147
2. Weed control	–do–	1	2	4	7	11
3. Rodent	-do-	85	89	193	374	517
4. Treatment of stored grain	(000 Quintals)	1	5	7	80	204
5. Pesticides used (tons)		24	26	39	114	75

The following programmes are covered under the plant protection scheme.

1. Pest and disease control.
2. Weed eradication.
3. Rodents control.
4. Covering the area by heated seeds.
5. Store pest control.
6. Soil treatment.
7. Prophylactic treatment.
8. Pesticides spray and dusting services to the cultivators.

9. Supply and sale of various pesticides, fungicides, odenticides, weedicides etc. to the cultivators through Block Development Officers and Sales Depots.
10. Training of extension staff and cultivators in plant protection measures.
11. Combat epidemics of pests, diseases by effective measures.
12. Plant protection measures in kitchen gardens.
13. Encouragement to manufacturers of pesticides by providing them technical grade material.
14. Strict enforcement of the Insecticides Act.
15. Holding exhibitions, demonstrations, trials etc.

An Endemic Area Scheme has also been launched for pest control. Besides the new techniques, the following traditional remedies are also applied to save crops from pests. :

1. While preparing the field for sowing, the stubles of the preceding crop are removed, burnt or buried.
2. The grasses on bunds of the field are removed and destroyed. The bunds are renovated.
3. About 2 per cent more seeds are sown so that when the plants infected by insects are roughed out, the plant population does not fall.
4. Light traps are set up in the field well ahead of the monsoon as indicators of the pest activity.
5. The crop and its surroundings are closely watched for pests.

Pest control operations are generally carried out in July-August in the following manner:

(a) Crops are regularly inspected at short intervals and remedial measures taken according to the nature of pest infestation.

(b) Crops infested by pests like phadka, grass hopper, red hairs, caterpillars and bhuihia weavils are dusted with BHC 10 per cent at the rate of 25 kg. per hectare.

(c) Crops are sprayed with 0.05 per cent diliandance. During September-October, paddy, if infested with gundhy bug, is dusted with BHC 5 per cent at the rate of 10 kg. per acre.

During October-November soil is treated with 5 per cent BHC or 5 per cent Eldrin Dust at the rate of 25 kg. per hectare. The insecticides are applied in furrows at the time of sowing against termites and with surface dusting against surface feeders.

Intensive Agriculture District Programme

The I.A.D. Programme was started in April, 1964 with the objective to obtain maximum yield from the land by providing necessary facilities tothe cultivators. It covers not only food crops but also vegetables, quick growing fruits, fodder, poultry,

dairy, fisher and other aspects of farming. The entire Territory, with 5 Community Development Blocks covering 287 villages and 24000 farming families were brought under the ambit of this programme. Major crops like wheat, gram, *bajra*, and vegetables were covered and they have shown good results. New crops like ground nut, hybrid maize, barseem, cow peas, Maxican wheat, and hybrid *bajra* were also introduced subsequently.

Supplies and Services

During 1963-64 fertiliser consumption in Delhi was a meagre 898 tons. In first two years of the I.A.D. Programme 2,300 M.T. and 4,012 M.T. respectively were distributed to cultivators through cooperatives. The fertiliser taccavi was also given to farmers. In 1965-66 a scheme for seed certification and testing was undertaken to facilitate the supply of tested seeds to cultivators. Under the seed multiplication and distribution scheme of the Department, a testing laboratory was also set up. Loans were also given to farmers to improve irrigation and to purchase tractors. Field demonstrations were conducted to educate farmers on the latest techniques of farming. About 1,000 demonstrations were conducted in 1966-67 alone. In the same year training camps were also organised. Special attention was given to high yielding varieties and vegetable production programme.

During 1964-65 improved agricultural implements such as disc harrow and iron plough were supplied to farmers on subsidized rates. Wheat threshing machines also became popular with the farmers. Large areas were brought under plant protection. Sprayers and dusters were distributed at subsidized rates to cultivators. An extensive training programme was organised in 1966-67 to train the staff on improved agricultural methods.

Adequate and timely credit to farmers is necessary for intensive farming. During 1965-66, a sum of Rs. 30 lakhs was advanced to cultivators as cooperative credit in cash and kind. Besides this, short term and medium term loans were also provided. To boost up the agricultural production, some other services were also undertaken. A Hundred Maund Club of farmers was organised to produce 100 maunds of grain per acre per year over a period of five years.

Intensive vegetable production programme was started in December, 1964. An orchard-cum-nursery was established during 1965-66 for the benefit of vegetable growers. Under applied nutrition programme started in 1965-66 kitchen garden school gardens and community gardens were established in Nangloi and Najafgarh Blocks. Free supply of fertilisers was made to the gardeners. An additional area of six thousand acres was brought under irrigation under minor irrigation programme. To meet the rising demand of cultivators for compost and sludge, additional 20 trucks were added to the existing fleet in 1965-66. Loans for the purchase of big and small tractors and other farm equipment were advanced to farmers

on easy terms. An extension and farmers training scheme was started to educate farmers in improved agricultural methods.

Workshop for Custom Cultivation, Harvesting and Thrashing

Most of the Delhi farmers own small holdings of 2.3 acres. It is not, therefore, economical for them to maintain even a pair of bullocks. A scheme was, therefore, launched during 1971-72, to provide cultivation and harvesting facilities to small farmers on nominal rates. The rates for various operations were as follows:

1.	Wheat harvesting by combine	Rs. 130 per acre
2.	Harrowing	Rs. 20 per acre
3.	Cultivation	Rs. 18 per acre
4.	Sowing with drill	Rs. 20 per acre
5.	Levelling	Rs. 25 per acre
6.	Planking	Rs. 08 per acre

During the Fifth Plan an area of 16906 acres and 2759 acres was tractorised and harvested respectively. For the Sixth Plan the following provisions were made:-

Year	Tractorisation	Harvesting
1978-79	4,600 Acres	800 Acres
1979-80	5,000 Acres	850 Acres
1980-81	5,000 Acres	900 Acres
1981-82	6,000 Acres	900 Acres
1982-83	6,500 Acres	950 Acres
Total	27,000 Acres	4,400 Acres

Agricultural Machinery

High yielding varieties of crops demand a good seed-cum-fertiliser drill as well as mechanical harvesting and threshing. The Delhi farmers have understood the need for improved agricultural implements. This is obvious from the following table:

Table—16

Use of Agricultural Implements in Delhi (based on live-stock census)

Description	1966	1972	1977	1982
Ploughs				
Wooden	17,660	13,660	9,465	5,570
Iron	2,125	2,665	1,779	1,828
Improved harrows & cultivators	1,376	1,507	1,005	3,687
Improved seed drills	1,208	3,907	1,889	4,464
Improved threshers	240	848	2,544	5,789
Rotary shaft cutters	12,243	976	955	27,969
Sprayers & dusters	52	246	100	170
Sugarcane crushers	167	592	250	11
Carts	8,459	5,689	4,384	4,044
Oil engines (with pumps for irrigation purpose)	134	1,169	1,996	2,212
Electric pump for irrigation purpose	633	3,264	4,595	7,454
Rehats (Persian wheel)	7,862	4,084	685	65
Tractors	666	1,290	1,822	2,513
Power tillers	2	39	59	436
Ghanis	18	200	14	—
Harvesters	—	—	—	366
Potato diggers	—	—	—	65

(Delhi Statistical Hand Book, 1985)

Under the tractor distribution programme, loans were advanced to cultivators. As a result of this the total number of tractors increased from 666 in 1966 to 2,513 in 1982. A workshop for effecting repairs of agricultural implements was also set up. It provide guidance to local fabricators and artisans in repairs and servicing.

Agricultural Implements

The use of implements generally depends on the size of the holding. The farmers of Delhi have been using the following implements:

A. **Small Holdings (less than 5 acres)**

(i) Bullocks (*desi* plough and *pora* attachments)

(ii) *Sohaga* or wooden leveller

(iii) Spade, hand hoe or *khurpi*

(iv) Hand sickle

(v) Persian wheel for irrigation

B. Medium Holdings (upto 12 acres)

1. Bullocks, *desi* plough with *pora* attachments
2. *Sohaga* or wooden leveller
3. Spade, hand hoe, rotary how, paddy weeder and paddy pundler (the latter two in case of paddy cultivation)
4. Disc harrow
5. *Kasela*
6. Oilpad thresher
7. Irrigation pump

C. Farms (small or medium holdings)

(i) Tractor
(ii) Disc harrow
(iii) Power thresher
(iv) Electric motor

Training of Farmers

The introduction of high yielding varieties of crops has made it necessary to educate farmers in improved agricultural operations. The Government sanctioned one farmers training and education unit for Delhi in December, 1961. The performance of the unit from 1968 to 1971 is given in the following table:

Table—17

Type of course	No. of courses		
	1968–69	1969–70	1970–71
Institutional Training			
Short course for farmers	7	10	10
Short course for women	5	10	..
Three month's course for young farmers	1	..	..
Production-cum-demonstration groups	17	191	100
Farmer's discussion groups	..	146	158
Farm Women discussion groups	..	29	32
No. of persons trained			
Short course for farmers	220	287	263
Short course for women	..	200	250
Three months course for young farmers	..	16	..
Production-cum-demonstration groups	581	5018	2259
Farmers discussion groups	..	2920	3190
Farm women discussion groups	..	580	643

Farm plans were prepared to enable the cultivator to assess his resources and requirements of improved seeds, fertilisers, pesticides and to plan out crop rotation to get maximum production.

The number of farm plans prepared in sixties is given below:

Year	No. of farm plans
1964–65	7,449
1965–66	6,832
1966–67	6,273
1967–68	6,634
1968–69	4,860

Mechanisation of Agriculture

Dependence on out dated implements has hindered the growth of agriculture in India for a long time. During the Third and Fourth Five Year Plans proper attention was paid to this aspect of agriculture. Consequently, the need of tractors for tilling and transport is well understood now. In 1961, there were only 258 tractors. This number increased to 666 in 1966 and 1,290 in 1972. Number of carts decreased from 7,385 in 1951 to 5,689 in 1972 and 4,044 in 1982. The progress of mechanisation in agriculture since 1961 is given in the following table:

Table--18

	Items	Percentage increased (+) or decreased(--) in 1972 over 1961
1.	Oil engines with pumps used for irrigation purposes	(+) 842.2
2.	Electric pumps used for irrigation purposes	(+) 4700.2
3.	Ghanis	(--) 207.2
4.	Carts	(--) 32.9
5.	Ploughs	(--) 5.5

Agricultural Marketing

Delhi depends on imports not only for food grains but also for dairy, fish and horticultural products. Milk and milk products come from places as far as Gujarat. Fish is imported from neighbouring states of Haryana, Rajasthan, Punjab and also from Gujarat and Bombay. Fruits and vegetables come from Himachal Pradesh, Jammu and Kashmir etc. Foodgrain and sugar deficiency is taken care of by Punjab, Haryana and Uttar Pradesh. These large imports create problems of management, transportation and storage.

The Bombay Agricultural Produce Market Act, 1939 extended to Delhi has been in force since 1957. Under this Act three markets located at Narela, Najafgarh and Zakhira regulate the marketing of agricultural produce in Delhi. The first two were grain mandis while the third was a fodder mandi.

Table—19

(Value of Agricultural Produce Marketed in three Mandis of Delhi) in lakhs

Name of Mandi	1962–63	1965–66	1970–71
Zakhira	74.2	138.4	207.4
Najafgarh	86 8	72.4	358.2
Narela	83.9	121.3	648.9
Total	244.9	332.1	1204.5

The value of agricultural produce marketed in Delhi increased from Rs. 244.9 lakhs in 1962–63 to 332.1 lakhs in 1965-66 and further to 1,204.5 lakhs in 1970–71 The value of produce in these mandis also increased substantially.

In 1976, the Delhi Agricultural Produce Marketing Act was introduced. During 1977–78, fruit and vegetable wholesale market Azadpur was brought under this Act. During the Sixth Plan it was proposed to regulate 8 more markets as follows:

1.	*Bakkar Mandi*	1979–80
2.	Poultry and fish market, Jama Masjid	1979–80
3.	Food grain market, Shahdara	1980–81
4.	Food grain market, Mehrauli	1980–81
5.	Wool & bristle market	1980–81
6.	Food grain market *ruiki mandi* with Naya Bazar as subsidiary market	1981-82
7.	Hides and skins market	1982–83
8.	Condiments and spices market	1982–83

The Act provides for a Market Committee in each regulated market for the implementation of the Act and rules made thereunder. In 1979-80 two markets i.e. Food Grain Market, Shahdara and Poultry and Fish Market, Jama Masjid were regulated. Delhi Agricultural Marketing Board and the Directorate of Agricultural Marketing supervise the trade in Delhi. The Directorate of Agricultural Marketing enforces proper quality control on grading of agricultural commodities so that consumers get pre-tested graded quality goods. A state level grading laboratory is functioning for this purpose. Testing facilities for butter, ghee and gram (besan) were added to it during 1979–80.

A scheme for training personnel in agricultural marketing has also been undertaken with a view to rendering efficient service to agriculturists. The scheme for improvement of marketing intelligence aims at a close support between producer and seller.

For research in agricultural marketing problems of Delhi, a fellowship scheme has been instituted in the Delhi University. It may, however, be stated here that the development of regulated markets in Delhi could not be completed, till the end of Fifth Plan in the absence of properly developed market yards with necessary infrastructural facilities. The need for such markets has acquired greater urgency in view of the surplus agricultural commodities. At present the following regulated markets are functioning in Delhi:

1. Grain Market, Narela
2. Grain market, Najafgarh
3. Fodder market, Zakhira
4. Fruit and vegetable market, Azadpur
5. Food and grain market, Shahdara
6. Hide and skin market, Bahadurgarh Road.

During the Seventh Five Year Plan it is intended to regulate Mawa Market and Fruit and Vegetable Market, Okhla. Delhi Agricultural Marketing Board (D.A.M. Board) set up under the Act comprises a Chairman (Development Commissioner), four official members and eight non-official members. It functions under the supervision of Lt. Governor. The objective of the Board is to regulate purchase, sale, storage and processing of agricultural produce, to establish markets in Delhi for this purpose and to exercise control and supervision over the market committees established under the Act.

Each Market Committee makes monetory contribution to the Board at the following rates to enable it to defray its expenses:

(i) On income not exceeding Rs. 10,000	10 per cent
(ii) On income exceeding Rs. 10,000 but not exceeding Rs. 15,000	
(a) On first Rs. 10,000	10 per cent
(b) On next Rs. 5,000	15 per cent
(iii) On income exceeding Rs. 15,000	
(a) On first Rs. 10,000	10 per cent
(b) On next Rs. 5,000	15 per cent
(c) On remaining income	20 per cent

All contributions received by the Board are credited to Marketing Development Fund. The Fund can be spent for the following purposes:

(i) Better marketing of agricultural produce

(ii) Marketing of agricultural produce on cooperative lines

(iii) Collection and dissemination of market rates and news

(iv) Grading and standardisation of agricultural produce

(v) General improvement in markets
(vi) Maintenance of the office of the Board
(vii) Aid to financially weak Market Committees in the shape of loan or grant
(viii) Payment of salary etc. to employees of the Board
(ix) Demonstration and publicity for agricultural improvement
(x) Improvement in agricultural produce
(xi) Education in marketing of agricultural produce
(xii) Construction of godowns
(xiii) Other purposes meant to promote the interest of the Board and Market Committees.

A sum of Rs. 39.54 lakhs was standing to the credit of the Board on 1st Jan. 1980. At present the following Agricultural Produce Market Committees (APMC) are functioning in Delhi:–

1. Agricultural Produce Market Committee, Azadpur
2. Agricultural Produce Market Committee, Najafgarh
3. Agricultural Produce Market Committee, Narela
4. Agricultural Produce Market Committee, Zakhira
5. Agricultural Produce Market Committee, Shahdara

A.P.M.C. Azadpur

The command area of fruit and vegetable market, Azadpur covers the whole of the Union Territory of Delhi. Items of fruit covered are almond, apple, banana, cherry, chickoo, fig, grape, guava, kakri, lemon, malta, mango, melon, mosombi, papaya, peach, pear, plum, pomegranate, orange, strawberry, water-melon, coconut, pine-apple, phalsa, apricot, Japani phul, jamun, chakotra, loquat, mulberry, sugarcane, belgiri, water chest nut, gulgul khirni, darh baggu-gosha, maize ear, date, khatta and mitha. Main vegetables include arvi, carrot, cuncumber, cauli-flower, cabbage, kachalu, leafy and fresh vegetable, onion, peas, potato, tomato, brinjal, gourd, lady-finger, tori, frashbin, bathua, sarson leaves, green lobia, spinach, turnip, raddish, tinda, kathal, jimikand, chukandar, green methi, moist chilli, karela, pumpkin, tamarind, moist giner, mait, garlic, chirchinda, parmal, kamal kakri, goose-berry, mushroom, green corriander, amla, singri, teat, lehsun, karam kalla, yeam, salad and bean.

The main activities of the committee are :

1. regulate entry of vehicles and persons into the market,
2. supervise the conduct of persons who enter the market for business,
3. grant, renew, refuse, suspend or cancel licenses,
4. settle disputes,
5. prosecute defaulters,

6. maintain market, and
7. collect and supply information in respect of sale, storage, processing, price and movement of agricultural produce.

The income of the Committee includes markets fee, licence fee, per trip fee, interest on advances,sale of forms, penalties (parking), storage charges etc. The expenditure items include maintenance, acquisition of land, contribution to Agricultural Marketing Board, pay and allowances of workers, marketing intelligence and office contingencies.

The membership of the Committee is as follows:

1. Agriculturists	6 (50 per cent nominated from neighibaring states)
2. Cooperative societies	9
3. Local authorities (M.C.D)	1 weighman
4. Metropolitan Council	1
5. Administrator's nominees	2

The Chairman of the Committee is nominated from amongst elected members of the Committee for three years. The Vice-Chairman is also nominated for three years. If the committee is superseded, Lt. Governor can appoint an Administrator to discharge the functions of the Committee. It happened in the case of Azadpur Committee in 1978–79.

To start with Azadpur Market covered an area of 44 acres Subsequently additional 32.28 acres was acquired for its expansion. In the second phase of its expansion additional 30 acres were to be acquired from D.D.A. Azadpur market has three subsidiary markets;

(i) Subzi Mandi, Shahdara
(ii) Subzi Mandi, Tilak Nagar
(iii) Fruit siding, Azadpur

All the notified agricultural products are covered by these subsidiary markets.

A.P.M.C. Najafgarh:

Najafgarh market deals in agricultural produce including wheat, gram, bajra, *jawar*. barley, *mung*, *moth*, *urad*, *lobia*, *arhar*, *gur*, sugar, *sarson*, taramira, tobacco, *khandsari*, rice, paddy, maize, *gur* and cotton seed. Najafgarh Market Committee comprises 14 members as follows :

Agricultarists	6
Cooperative societies	1
Agents of traders	2
Weighman	1
Local body	1
Metropolitan Council	1
Consumers	2

The jurisdiction of the Committee covers 125 villages and some other localities.

A.P.M.C. Narela

Narela market was regularised in 1959 under the Bombay Agriculture Produce Marketing Act, 1939. Under the Delhi Agricultural Produce Marketing Act, 1976, the first Marketing Committee of Narela was constituted by the Administrator of Delhi as under:

1. Agriculturists	6
2. Traders	2
3. Weighman	1
4. Metropolitan Council	1
5. Municipal Corporation of Delhi	1
6. Nominee of the Administrator	2
7. Cooperative societies	1

Narela *mandi* covers about 70 villages of Alipur and Kanjhawala Blocks. It deals in the notified agricultural produce such as wheat, gram, *bajra*, jawar, maize, barley, *gur*, *Shakar* mustard, taramira, *masur*, mash (Urad), *guar*, cotton seed, rice, paddy, sugar, *mung* and chillies.

A.P.M.C. Zakhira

This *mandi* covers the entire territory of Delhi. The Zakhira Fodder Market was regularised in December, 1959 under Bombay Agricultural Produce Market Act, 1939. It deals in *jawar karbi*, *bajra karbi*, wheat *bhusa*, gram *bhusa*, jawar, green birsin, *ajka* or *poosan*, *jau* green and *palla*. The Delhi Agricultural Produce Markeing (Regulation) Act, 1976 has since been extended to Zakhira. In some places like Hari Nagar, Ashram, Najafgarh, Kishanganj, and Shahdara fodder trade is being carried in an unauthorised manner. Efforts are being made to declare all these unregulated markets as subsidiary markets (sub yards).

On implementation of Delhi Agricultural Produce Marketing (Regulation) Act, 1976 a separate Directorate of Agricultural Marketing was created. Delhi Agricultural Marketing Board was also set up for supervising the Market Committees established under the Act. The Planning and Design Cell of the Ministry of Agriculture, Department of Rural Development, made a survey of marketing of fruits and vegetables. Its report concluded that the existing marketing network ignores large areas of the city. The gap between the production cost and consumer price was also found very high. In view of this, the Administration has decided to set up new markets in south Delhi, trans-Yamuna area and west Delhi. New grian markets are also being set up at Najafgarh and Narela.

The total income of A.P.M.C's of Narela, Najafgarh, Zakhira and Azadpur from various sources i.e. licence fee, market fee, per trip fee, interest, refund of loan and advance by staff etc. is given in the following table:

Table—20

(Income of Agricultural Produce Marketing Committees)

(Rs. in lakhs)

Committee	1977–78	1978–79	1979–80
1. A.P.M.C., Zakhira	0.97	1.61	2.62
2. A.P.M.C., Narela	2.63	6.25	6.15
3. A.P.M.C., Najafgarh	1.05	2.61	2.88
4. A.P.M.C. Azadpur	3.94	7.68	217.17

Under the Act, the Director of Agriculture Marketing for the Union Territory of Delhi is responsible for holding elections of Market Committees. A permanent election machinery has been set up in the Directorate of Agricultural Marketing. The Director is also the Secretary of the Delhi Agricultural Marketing Board.

Irrigation

The availability of water in adequate quantity is the basic need of agriculture. As the availability of water in winter and summer is inadequate to support multiple cropping on an extensive scale, the irrigation is vital for the growth of agriculture in the Territory. This is all the more so because rainfall is not only scanty but also erratic as shown below:

Table—21

Rainfall in Delhi

(Rainfall in centimetres)

			1970		1977		1978		1984
Month	Normal rain-fall	No. of rainy days	Total rain-fall	No. of rainy days	Total rain-fall	No. of rainy days	Total rain-fall	No. of rainy days	Total rain-fall
1	2	3	4	5	6	7	8	9	10
Jan.	21	3	51.2	4	35.[illegible]	0	0.0	—	0.5
Feb.	24	4	52.5	0	0.6	3	27.3	1	4.2
Mar.	13	2	60.0	0	0.0	4	20.9	—	0.0
Apr.	10	—	—	5	42.2	[illegible]	11.9	1	29.6
May.	10	1	53.6	3	33.8	0	0.0	1	2.8
Jun.	68	6	121.7	8	100.5	6	11[illegible].5	4	32.[illegible]
July	186	5	49.7	21	421.7	17	261.2	11	155.0
Aug.	170	11	199.5	4	82.9	14	358.2	12	34[illegible].5
Sep.	135	9	154.0	[illegible]	152.5	5	250.3	4	128.1
Oct.	14	1	5.4	2	31.6	0	0.0	—	0.0
Nov.	2	—	—	0	0.0	0	0.0	—	t
Dec.	9	—	—	2	15.7	[illegible]	2.6	—	t
Total	662	42	747.6	60	926.5	51	1043.9	34	694.4

(Statistical Hand Book, Delhi Administration, Delhi)

Canals and underground water are the main source of irrigation. The water resources available for irrigation purposes in Delhi are as follows:

Table—22

Irrigation in Union Territory

S. No.	Sources of Irrigation	1962–63	1970–71	1976–77
1.	Canals			
	(i) Number	3	3	3
	(ii) Length (kms)	56	56	56
2.	Tanks	3	3	3
3.	Wells (including Persian wells kachha and pucca wells etc.)	8,347	6,097	3,464
4.	Tube wells (Electric/Diesel)	61	3,597	8,072
5.	Pump-sets	N.A.	2,511	1,284
	Includes 1965 wells not in use.			

(Office of Deputy Commissioner, Delhi)

The position in respect of canals and tanks remained the same from 1962–63 to 1976–77. The number of irrigation wells, however, declined from 8,347 to 3,464 during the same period. A number of wells dried up on account of low underground water table. The number of tube-wells increased from 61 in 1962–63 to 8,072 in 1976–77. The number of pump sets decreased from 2,511 in 1970–71 to 1,284 in 1976–77. This indicates the cultivators preference for tube-wells. However, in the year 1979-80, the number of pump sets again went up to 3,000 due to drought in 1979. In Delhi small farmers are more dependent on well and pump set irrigation than the bigger farmers. For 14,764 holdings of 1.0 hectare and below there are only 1,022 tube-wells, while for 9,068 holdings of 1.0 to 3.0 hectares, there are 2,265 tube-wells. Out of the total wells in use, 19.6 per cent are without pump sets.

In 1947, 1[illegible].2 thousand hectares of land was under irrigation in Delhi. It increased to 41.2 thousand hectares in 1951–52 and 43 thousand hectares in 1966–67. The introduction of high yielding varieties of crops further necessitated improved irrigation. Consequently irrigated area increased to 54 thousand hectares in 1968–69 and [illegible]7 thousand hectares in 1969–70. It reached an all time record of 72 thousand hectares in 1976–77 but declined to 56.15 thousand hectares in 1983–84. The increase has taken place mostly in minor irrigation viz., wells and tubewells. The land irrigated from wells increased from 17.9 thousand hectares in 1965–66 to 44.7 thousand hectares in 1976–77. The area irrigated by tube-wells was only 1.6 thousand hectares in 1965–66. It increased to 38 thousand hectares by 1976–77. The area irrigated by canals

came down to 10.6 thousand hectares in 1975–76 from 14 thousand hectares in 1965–66. The area irrigated by tanks is negligible. Thus, the share of canals and tanks in irrigation is on decline, while that of minor irrigation particularly, wells and tube-wells, is on rise as evident from the following table:

Table–23

Source of Irrigation & Irrigated area in Delhi

Source of Irrigation	1965–66	1970–71	1973–74	1975–76	1976–77	1977–78	1983–84
1. Canals	14,203	12,540	13,857	10,604	15,543	14,346	4,299
	(42.23)	(26.27)	(24.57)	(20.51)	(25.66)	(27.18)	(8.45)
2. Tanks	1,473	497	787	280	—	—	781
	(4.38)	(1.04)	(1.40)	(0.54)	—	—	(1.54)
3. Wells	17,954	34,696	41,752	40,824	44,742	38,445	13,911
	(52.39)	(72.69)	(74.03)	(78.95)	(74.34)	(72.82)	(27.35)
(a) Tube-wells	1,613	19,463	35,394	33,122	36,207	28,026	31.510
	(4.80)	(40.78)	(62.76)	(64.06)	(63.45)	(53.08)	(61.94)
(b) Other wells	16,341	15,293	6,358	7,702	6,585	10.419	367
	(48.59)	(31.91)	(11.27)	(14.89)	(10.75)	(19.74)	(0.72)
4. Net area irrigated (1+2+3)	33,630	47,733	56,396	51,708	60,185	52,791	50,886
	(100)	(100)	(100)	(100)	(100)	(100)	(100)
5. Area irrigated under more than one crop	4,920	8,492	14,144	7,646	12,130	1,643	5,282
6. Gross area irrigated (4+5)	38,550	56,225	70.540	59.354	72,315	54,434	56,148

(Statistical Handbook, Delhi Administration, 1985)
(Figures given in brackets indicate percentage to total)

Major Irrigation

About a fourth of the total irrigated area of Delhi receives water from three canals, viz. (1) Western Jamuna canal, (2) Eastern Jamuna Canal and (3) Agra Canal. The total length of these canals is 56 kms. Western Jamuna Canal irrigates parts of Alipur and Kanjhawala Blocks. Eastern Jamuna Canal irrigates areas of Shahdara Block. Agra Canal, which originates from Okhla, irrigates a very small area of Delhi. There is not much scope for the development of canal irrigation in Delhi. The area under canal irrigation has consequently decreased from 50.0 per cent of the total irrigated area in 1950–51 to 40.0 per cent in 1960–61 and further to 26.4 per cent in 1970–71. In all there are 18 main channels (Appx. V). Out of these the four channels viz.

Dhansa Minor, Surakhpur Minor, 1-L of Surakhpur Minor and 2-L of Surakhpur Minor were added later.

Medium Irrigation

Till 1978 only minor irrigation schemes were being implemented by the Administration. But subsequently two schemes of medium category, viz. (*i*) Extension of effluent irrigation from Okhla treatment plant to the areas of Mehrauli and Najafgarh Blocks and (*ii*) Modernisation of Western Jamuna Canal System in the Sixth Plan were also entrusted to it. An expenditure of Rs. 52 lakhs was incurred during 1980–85 under the effluent irrigation scheme. With proper utilization of this water 5,000 hectares land in Mehrauli and Najafgarh Blocks can be brought under irrigation. The estimated cost of the scheme is put at Rs. 7 crores. A provision of Rs. 10 lakhs has been made in Seventh Plan for this purpose.

The command area of the Western Jamuna Canal system covers Alipur and Nangloi Blocks and some parts of Najafgarh Block. These canals are not properly maintained and there is no proper drainage at the tail end of the canals. There is a proposal to take over this canal system from the Haryana Government to make it more useful. When implemented the cost of the proposed scheme is likely to be Rs. 2 crores.

Minor Irrigation

Bund/Tanks

Tank irrigation is also used with benefit in some parts of Union Territory. Most of the existing bunds are in the Mehrauli Block. An area of 368 hectares benefits from tank irrigation as detailed below:

Name of Bund	Length (Feet)	Area Benefitted (acres/hectares)
Dera Bund No. 1 & 2	3,700	150 (60.71)
Asola Bund	3,100	100 (40.47)
Gadaipur Bund	9,500	50 (20.24)
Sultanpur Bund	6,700	100 (40.47)
Rajokri Bund No. I	6,500	- -
Bijwasan Bund	10,000	150 (60.71)
Devli Adjoining Bund	4,000	20 (8.05)
Fatehpur Beri Bund	700	340 (137.60)
Total	44,200	910 (368.25)

The Minor Irrigation Department of Delhi Administration has undertaken the scheme "Construction of new bunds and restoration of old bunds" with the following objectives:

(i) to increase the sub-soil water level

(ii) to provide soakage irrigation facilities on the upstreams of bunds, and

(iii) to reclaim the land for agriculture in due course

Following bunds have since been constructed:

1. Mandi Bund
2. Bhathi Bund
3. Rajokri-II Bund
4. Aya Nagar No. 182 Bund
5. Jaunpur Bund

The construction of following new bunds is proposed:

1. Dera (Dera-II) Bund
2. Chandanhola Bund
3. Bunds at suitable sites in Mehrauli Block.

In 1976-77, the total area irrigated by tanks was 104.87 hectares i.e., 0.19 per cent of the total irrigated area. This irrigation system has not achieved much progress.

Tube-Wells

Tube-well irrigation has made rapid progress in Union Territory. From only 61 tube-wells in Delhi in 1962-63 the number increased to 3,597 in 1970-71 and 8,070 in 1976-77. Of these 2,557 were diesel and the rest electric.

Tube wells irrigated an area of 40,456 hectares accounting for 71.8 per cent of the irrigated area (Appx. VI). During Fourth Plan about 100 tubewells were installed by the Delhi Administration. Unfortunately most of them were not put to optimum use due to non-existence of proper distribution system. In the Sixth Plan a scheme costing Rs. 15.45 lakhs was prepared to improve the irrigation capacity of these tube-wells, to bring additional 750 hectares of land under irrigation.

Installation of 25 deep tube-wells during Fifth and Sixth Plans brought another 200 hectares under irrigation. At present there are 172 State tube-wells, 30 deep and 142 shallow, in Delhi. In the Seventh Plan it is proposed to install 72 shallow cavity tube-wells and 25 deep tube wells.

Wells

This source of irrigation is decreasing day by day. There were about 10,700 wells by 1968. The number decreased to 4,564 in 1976-77. Of these 1,965 were not in use. Wells irrigated 1,534 hectares i.e., 2.72 per cent of the total area under irrigation. (Appx.-VI).

Effluent Irrigation

Earlier effluent irrigation system was under the charge of Municipal Corporation of Delhi. It was transferred to Delhi Administration in 1971. The following schemes were included in the Five Year Plans:

(i) Okhla Sewage Treatment Plant

Initially the effluent from the Okhla Sewage Treatment Plant was being utilized for irrigation purposes only in those areas where gravity irrigation was possible. During the Fourth Plan 360 hectares of land at higher level was also brought under this scheme through lift irrigation at an estimated cost of Rs. 8.50 lakhs. During Fifth Plan, a scheme to extend it to the areas of village Jaitpur, Mithapur and Molar Bund across Agra Canal, was completed at an estimated cost of Rs. 20.35 lakhs. The surplus effluent at Okhla is to be diverted to Mehrauli Block under Medium Irrigation Scheme at a cost of Rs. 21.55 lakhs.

(ii) Keshopur Treatment Plant

A scheme for providing effluent irrigation from this plant for cultivators of west Delhi was taken up during the Fourth Plan. It was to be completed in three phases at an estimated cost of Rs. 60.00 lakhs. An outlay of Rs. 27.50 lakhs was provided in the Sixth Plan for this purpose. Under Phase-III it is proposed to enhance the plant capacity from 90 to 175 cusecs to provide additional irrigation to 3,600 hectares of land in the villages of Nilothi, Qumausuddin Nagar, Ranhela, Nangloi Jat, Mundka, Bakarwala etc. An outlay of Rs. one crore had been approved in the Seventh Plan for this scheme.

(iii) Connection Treatment Plant

It provides irrigation to 300 hectares of land adjoining the plant but it can be used to irrigate more areas. The proposed construction of 5 Km. long feeder channel from the plant will bring an additional area of 1,300 hectares under irrigation in villages Jharoda, Mukundpur, Bhalswa, Burari, Nathupura, Kamalpur and Ibrahimpur. A sum of Rs. 25 lakhs was spent on this scheme during 1974–78. The sub-minors No. 2, 4 and 5 were completed in 1980–81. An outlay of Rs. 20.00 lakhs has been approved for its development in Seventh Plan.

(iv) Rithala Irrigation Scheme

It is a MCD venture near village Rithala in North Delhi. Here 150 cusecs of effluent water will be available for irrigation purpose. It will cover an area of 4,000 hectares around the treatment plant. An outlav of Rs. 5.00 lakhs has been approved for its development in the Seventh Plan

Sewage Irrigation Scheme at Narela

This scheme was launched during Fifth Plan to irrigate an expected area of 200 acres. In the Seventh Plan an outlay of Rs. one lakh has been approved for this scheme.

Exploitation of ground water resources

Under this scheme, an engineering division has been set up to undertake exploration, investigation and assessment of ground water resources The division

provides technical guidance to farmers on digging of wells and installation of tube-wells. On completion of this scheme, an additional area of 200 hectares will be brought under irrigation.

Drainage Scheme

There are a number of isolated pockets in rural Delhi which are flooded during the rainy season and are available for cultivation only in the *Rabi* crops. To overcome this problem it was proposed to drain out the water from these pockets. Many villages have since been covered under this scheme.

Master Plan for Irrigation

Ground water utilisation in the Union Territory has almost reached a saturation point. A planning wing headed by a Superintendent Engineer (Master Plan) has, therefore, been created to draw up schemes for augmenting irrigation resources. An outlay of Rs. 18.00 lakhs had been provided for this purpose in the Sixth Plan. The Master Plan has since been proposed and placed before Technical Expert Committee.

The effluent produced after the treatment of sewage is a big potential source of water in Delhi. Till the end of Fourth Plan, the quantum of effluent of the three treatment plants was 98 M.G.D. It has now increased to 118 M.G.D. During the Fifth Plan, the sewerage capacity of Keshopur treatment plant alone increased from 12 to 32 M.G.D. The position of various sewage treatment plants till the end of Sixth Plan was as follows:

Table-24

Progress in Effluent Irrigation

(M.G.D. Units)

Plant	Ist Plan	At the end of Fourth Plan	Fifth Plan	Sixth Plan
Okhla	36	66	66	88
Keshopur	-	12	32	32
Coronation		20	20	20
Oxidation Ponds	—	—	—	12
Total	36	98	118	152

Construction of two treatment plants at Rithala and Shahdara with a capacity of 75 and 60 M.G.D. respectively, is also progressing.

Irrigation & Cropping Pattern

There was hardly any double cropping on the irrigated land in Delhi prior to 1960–61. The double cropped area now accounts for 44.6 per cent of the total sown

area while net irrigated area is 54.4 per cent of the total sown area. The introduction of high yielding varieties of crops has brought a change in the cropping pattern. More emphasis is now laid on certain crops as against others. This is well illustrated in the following table:

Table-25

Irrigated area under principal crops in Delhi (1000 hectores)

Crop	1950–51	1960–61	1965–66	1970–71	1977–78	1978–79	1983-84
Wheat	14.0 (43.8)	16.1 (47.1)	20.0 (51.3)	38.9 (69.9)	39.0 (72.2)	46.2 (72.2)	42.7 (77.6)
Total food grain	20.0 (62.5)	21.0 (61.8)	25.0 (64.1)	44.7 (80.3)	43.7 (83.3)	50.57 (82.6)	48.2 (87.6)
Sugarcane	1.0 (3.1)	5.0 (10.7)	5.0 (12.8)	1.8 (5.5)	0.4 (0.8)	0.3 (0.4)	0.1 (0.2)
Fruits and Vegetables	N.A.	(11.8)	5.0 (12.8)	4.4 (7.8)	3.5 (6.7)	3.9 (6.6)	4.2 (7.6)
Fodder Crops	N.A.	2.0 (5.9)	(10.3)	3.1 (3.2)	4.6 (8.8)	6.5 (10.6)	2.5 (4.6)
Total Irrigated Area	32.0 (100)	32.0 (100)	38.5 (100)	56.2 (100)	52.2 (100)	61.27 (100)	55.0 (100)

(Figure in brackets are percentages to the total irrigated area)

It is notable that most of the irrigation facilities are being used for food grains, particularly wheat. During 1977–78. wheat accounted for 72.2 per cent as against 47.1 per cent of the total irrigated area in 1960-61.

The gradual improvement in irrigation facilities from 1950–51 to 1977–78 is reflected in the following table:

Table-26

(Area in hectare)

Year	Net sown area	Net irrigated area	Percentage of irrigated area to net area sown
1950–51	84,067	31,500	33.5
1955–56	87,775	31,560	36.0
1960–61	87,406	33,840	38.7
1965–66	80,222	33,640	41.9
1970–71	80,510	47,723	59.3
1974–75	77,846	56,396	72.5
1975–76	82,685	51,708	62.5
1976–77	82,383	60,185	73.0
1977–78	69,392	52,791	76.0

Soil Conservation and Afforestation

Soil conservation is integral to agricultural development. The necessity of soil conservation measures was felt in Delhi as due to the proximity of Yamuna river many areas suffer from water logging. In the Fourth Plan, an outlay of Rs. 15 lakhs was provided for this purpose. Following programmes have been undertaken to this effect:

(1) **Afforestation and pasture improvement** : This scheme was included in the Fifth Plan with an outlay of Rs. 17.95 lakhs. It envisaged raising of planned wood lands and pasture lands with palatable nutritious grasses. Fallow tracts of Panchayat lands were also to be covered under this scheme.

(2) **Planting trees:** All the rural roads and protection bunds in Delhi have been marked for planting. National highways passing through Delhi have also been transferred to Delhi Administration by Ministry of Transport for land-scaping and avenue planting. An outlay of Rs. 14.50 lakhs was made in the Fifth Plan to cover a length of 100 kms. During Sixth Plan, 17 lakh trees were planted with an expenditure of Rs. 72.51 lakhs. The maintenance part also received adequate attention and 70 per cent of the outlay was meant to be spent on it.

(3) **Improving soil health:** In the Seventh Plan an outlay of 1.10 crores has been made for planting 15 lakh trees. This scheme was included in the Fifth Plan with a view to improve the soil health and fertility by application of gypsum. An outlay of Rs. 40 lakhs was made for this purpose. Priority was given to this programme because 34 per cent of the Delhi soil suffers from alkalinity and salinity. For reclamation, subsidies and loans were given to farmers and it was proposed to reclaim 2,500 hectares of land during the plan

The Agriculture Testing Laboratory (Vigyan Mandir) at Najafgarh has been renovated and modernised, to take up analysis of micronutrients, fertilizers, pesticides and insecticides.

(4) **Control of soil erosion:** Two catchment areas known as new Ayanagar bund and Deoli bund had been selected for afforestation and soil conservation work during the Sixth Plan. The main objective is to control erosions and silting so as to bring more land under the plough.

(5) **Vigyan Mandir scheme:** The objective of the Vigyan Mandir scheme is to stimulate science consciousness among the people in rural areas of the country. The first Vigyan Mandir was started in 1953 in village Kapashera by the C.S.I.R., New Delhi. It was later shifted to Najafgarh in 1960. The Central Government transferred the scheme to Delhi Administration in 1963 who converted it into a soil and water testing laboratory under the Development Department. It has since been

functioning as 'Krishi Prashikshan Prayogshala'. The performance of the laboratory is given below:

Performance of Vigyan Mandir

(No. of samples

Year	69—70	70—71	71—72	72—73	73—74	74—75	75—76	76—77	77—78	78—79
Soil	232	492	880	546	2,140	1,549	939	1,168	2.084	4,192
Water	48	251	188	123	193	278	271	372	230	127

In the Seventh Plan it is proposed to analyse 35,000 samples of soil and water of the affected areas.

(6) **Land reclamation and utilisation**

In Delhi nearly 10,000 hectares of land affected by water logging, alkalinity and salinity require reclamation. A scheme was launched in 1972–73 to reclaim land after a survey of the water logged areas. The area reclaimed between 1972–73 and 1977–78 was as under:

Year	(hectares of land)
1972–73	20
1973–74	50
1974–75	120
1975–76	200
1976–77	200
1977–78	200

The scope of the scheme has since been expanded to cover more areas. It was proposed to reclaim 5,000 hectares of land during the Fifth Plan.

Drought and Flood

Drought and flood are intimately related to agriculture. Drought often results in famine with catastrophic results to men and cattle. Recently 1979 was declared a drought year. This drought damaged the standing *kharif* crops of *bajra*, maize, paddy and vegetables over an area of 56,245 acres. The total loss assessed by the development department was of the order of Rs. 3.33 crores. The following was the extent of damage to crops:

Extent of damage	**Area in acres**
Fully damaged	65,009
Partly damaged	27,746
Remained unsown	11,905
Total :	1,04,660

Flood

Excessive rains and flood also affect the agriculture adversely. In recent years the all time record of more than 10.5 inches rain on 20th and 21st July, 1958 caused flooding of large rural areas and damaged standing crops. Earlier in 1924 floods caused heavy damage in some villages of Shahdara block and their standing crops were washed.

In view of the havoc caused by the flood in 1958, Reddy Committee was appointed o suggest measures for flood control. The Committee recommended the improvement of flood protection bunds and shifting of villages situated between the river and bund to safer sites.

But these measures did not prove adequate. In 1964 flood damaged crops worth Rs. 125 lakhs and an expenditure of Rs. 40.00 lakhs had to be incurred on flood relief measures. Again Delhi had to face an unprecedented flood in September, 1978. These floods, besides a large number of villages also affected some urban colonies. To protect the harvest from flood, effective flood control is required in the Union Territory.

Conclusion

The rural area within the Union Territory is small and therefore, the scope for large scale agricultural activity is limited. Rapid urbanisation is also reducing the agricultural area. Despite this, if the agriculture can be developed on modern lines the level of agricultural production can be substantially increased. A number of schemes regarding land reclamation and development, distribution of improved seeds, manure and implements, minor irrigation works, plant protection, improved method of production etc. have yielded good results (see appendix-VII). Farmers are also adopting allied agricultural activities like poultry, piggery, fishery.

Rapid growth of Delhi's urban population since independence has led to reduction in agricultural land. From 82,685 hectares in 1975-76 it was reduced to 72,842 hectares in 1978-79 and 54 076 hectares in 1979-80 The process of acquisition of land is continuing. Keeping in view the decreasing availability of land for agriculture, the Development Department is encouraging the production of vegetables so as to make Delhi self-sufficient in this area and to provide remunerative prices to the farmers.

Impact of the programme however, seems to have been limited. Double or multiple cropping as well as improved irrigation, the main indications of development have not shown satisfactory progress in recent years Production increased rapidly during 1966-67 and 1969-70 on account of high yielding varieties of wheat. The extension agencies have also contributed to this development. But the targets achieved

are not commensurate with the effort involved and the money spent. Future programme of agricultural development need therefore, be assessed in a more realistic manner. A break-through is possible by bringing more and more area under multiple cropping. Fast urbanisation need also be arrested to prevent further shrinkage of agricultural area.

Live-stock and Animal Husbandry

Live-stock is an integral part of rural economy. According to live-stock census of 1982 there were 52,109 cattle, 177,600 buflaloes and 35,419 other animals in the Union Territory of Delhi. The cattle and buffalo population increased progressively from 1.6 lakhs in 1951 to 2.6 lakhs in 1982.

The census figures indicate a big increase in cattle population upto 1956. Then it started declining. Cattle population of 1,06,958 in 1951, decreased to 93,727 in 1961, to 67,919 in 1972 and to 52,109 in 1982. Buffalo population, however, showed an increasing trend. From 56,565 in 1951 it increased to 1,00,082 in 1961 and to 1,28,205 in 1972. It declined to 10,8,924 in 1977 but again went up to 1.77,600 in 1982. (see Appendix VIII)

Downward trend in cattle population and an upward trend in buffalo population is the result of rapid urbanisation and tractor farming. However, in milk production Delhi is far ahead of other states as indicated in the following table:

Table-27

Average annual yield of milk in some states in India

(In Lts.)

State	Cow	Buffalo
Bihar	600	1,352
Delhi	1,300	2,931
Himachal Pradesh	194	545
Madhya Pradesh	145	710
Maharashtra	175	751
Karnataka	193	624
Punjab	1,056	1,819
Rajasthan	277	633
Uttar Pradesh	638	1,470
West Bengal	500	1,376
All India Average	396	1,077

(Directorate of Marketing and Inspection, Nagpur)

According to the live stock census 1972, in Union Territory, sheep, goats, horses, mules, donkeys, camels, pigs etc. numbered 41,597. Their aggregate has declined but the population of sheep and goats increased from 4,434 and 11,918 in 1972 to 9,276 and 19,869 in 1977 respectively. The sheep and goats are purchased from Rajasthan and other adjoining states for their meat and milk products.

Delhi is the centre for Haryana breed of cows and Murrah breed of buffaloes. Efforts have been made to improve the performance of these animals under various plans. This developmental activity is under the charge of Animal Husbandry Department. For increased production of milk, meat, fish and eggs, the Department has three wings viz. cattle breeding, poultry farming, and fisheries. The aims of the Department are:

(I) to protect the live-stock from diseases

(II) to arrange for their balanced food

(III) to improve their breed

(IV) to promote their products i.e., milk, meat etc.

(V) to create employment through various live-stock development programmes.

With these objectives the animals coming into Delhi are vaccinated against rinderpest and other contagious diseases at the border check posts. Measures have been taken to improve the breed of cattle and buffaloes under the key village scheme. Villagers have been advanced loans on low interest and cash terms to purchase milch cattle. A cattle breeding farm has been established at Satbari near Mehrauli where Holstein-Fresian bulls have been kept. Administration is running a Central *Gosadan* at Gularbhoj (near Nainital) where 300 to 400 animals can be maintained. 4 *Goshalas* are located at Kishan Ganj, Bawana, Najafagrh and Mehrauli to look after 1000 old and unproductive cattle.

Supply of Bulls for Natural Breeding

Cow-bulls of the Haryana breed and buffalo bulls of the Murrah breed are distributed to panchayats from the funds of the Delhi Municipal Corporation for natural services. The N.D.M.C. spends Rs. 25,000 annually for the purchase of these animals. There are about 173 bulls operating in rural Delhi. The Indian Council of Agricultural Research started a key village scheme in Nangloi with an artificial insemination centre in 1954. It was transferred to Delhi Administration in 1964. Subsequently artificial insemination centres were established at Najafgarh (1967) and Shahdara (1968) as well. Thus, by the end of 1968, Delhi had four full-fledged artificial insemination centres where high pedigree bulls were maintained at Government cost. In this manner 1,000 females could be served in a year by a single bull against 100 through natural service. A semen bank has been set up to encourage cross-breeding with Holstein semen. In the Fourth Plan (1969–74), this work was further expanded by introducing 3 more

artificial insemination centres and 33 stock semen centres. Till the Fourth Plan, the emphasis was on the production of pure breed Haryana cattle and Murrah buffaloes. But subsequently a Holstein-Fresian farm was established.

Milch Cattle Loans

The objective of this scheme is to provide loan to cattle breeders with a view to increase the production of milk. An amount of Rs. 57 lakhs was given as loan during the Fourth Plan for the purpose. It was increased to Rs. 60 lakhs during the Fifth Plan.

Development of Goshalas

There are five registered *Goshalas* in the Territory. *Goshalas* serve the old and un-productive animals. A scheme of grant-in-aid was included in the Sixth Plan with an outlay of Rs. 17 lakhs to give subsidy for covering about seven thousand un-productive animals. There is also provision to salvage the productive animals through A.I. Techniques for cross breeding. An outlay of Rs. 10.00 lakhs was approved in the Seventh Plan (1985-90) to provide grant-in-aid of Rs. 500 per animal annually.

Animal Health-Grant-in-aid to S.P.C.A.

The Delhi S.P.C.A. was registered in 1928 and is recognised by Animal Welfare Board, Govt. of India. The Society is engaged in preventing cruelty to animals. During the Fifth Plan an amount of Rs. 6 lakhs was given to the Society as grant-in-aid to expand its activities in the trans-Yamuna and South Delhi areas. During the Sixth Plan a subsidy of Rs. 35 lakhs was given to the Society. For the Seventh Plan a provision of Rs. 30 lakhs has been made.

Gularbhoj Gosadan

The *Gosadan* is located in Nainital District of U.P. with 318 acres of grazing land. About 300 to 400 cattle stay in *Gosadan* throughout the year. A *Charmalaya* is also attached to the *Gosadan* where hides and skins are processed. It came under Delhi Administration in 1969.

Cattle Breeding Farm Satbari

The cattle breeding farm at Satbari was started in 1973 with the import of 2 male calves and 35 female calves of Holstein-Fresian breed for cross-breeding programme in Delhi. The farm has been able to produce pure-breed bulls with high potential and superior germ-plasm. This farm provides replacement of bulls to the artificial insemination centres for cross-breeding programme. It spares bulls for any organised dairy farm, *Goshala* etc. The surplus cows are available to general public and farmers. It was proposed to produce more animals of superior germ-plasm for the improvement of indigenous cattle by cross-breeding. There are 130 exotic animals at the cattle breeding farm. There is a proposal to establish a calf rearing farm at Jaonti, Hauz Rani.

Intensification of Cattle Development (Key Village Blocks)

The scheme was started during the Third Plan. An outlay of Rs. 50 lakhs was approved in the Fifth Plan for producing 1,000 cross-breed progeny every year by setting up artificial insemination centres. The scheme was continued in the Sixth Plan. The objective was to bring all the cows under cross-breeding programme with proper feeding, management and health care. At the end of 1979, there were five main centres and 25 sub-centres for the purpose. These were increased by two centres and 15 sub-centres to facilitate the use and an outlay of Rs 45 lakhs was approved in the Sixth Plan. In 1979–80 an expenditure of Rs. 6 lakhs was incurred. As per the recommendations of the working group, frozen semen technology was introduced in 1980–81. It was proposed to perform artificial insemination on 6000 cattle during the Sixth Plan. In 1986 there were 6 artificial insemination centres and 30 sub-centres where facilities, for artificial insemination with liquid warm semen, are provided free of cost to the cattle owners. 18 H.F. bulls and Murrah buffaloes are located at these centres and only liquid semen is used. An outlay of Rs. 15 lakhs was approved for the Seventh Plan to establish a frozen semen bank at Satbari and 30 more artificial insemination sub-centres.

Gopasthami Cattle Fair

Cattle shows are organised in each Block of the Union Territory every year. The objective is to provide education and incentive to the farmers in rearing cattle. The fairs provide an opportunity to farmers and the experts to exchange ideas. During 1979–80, 5-one day cattle shows were organised

Rearing of Cross-breed Heifers

It is a centrally sponsored scheme to provide part time employment to small, marginal farmers and landless agricultural labourers to enable them to earn extra income. Cross breeding of their cows is done with artificial insemination technique from Holstein-Fresian bulls. The calves in the age group of 4 to 28 months are given subsidy for food and fodder amounting to 50 per cent of the cost of Rs. 1,000 per year. Medical care is also provided The financial implications of the scheme are as follows:

Item of exp.	1978–7(	70–80	80–81	81–84	82–84	Total
Subsidy	3.75	4.30	4.30	5.38	5.38	21.51
Medicines/Insti. Vaccines etc.	0.25	0.30	0.30	0.30	0.31	1.35
Total	4.00	4.60	4.60	5.68	5.69	22.86

Veterinary Hospitals

In 1960–61 there were 16 Government veterinary hospitals, 17 dispensaries (including mobile dispensaries), and 3 private clinics to look after the animal health

in Union Territory. 27 veterinary doctors supervised the working of these hospitals and dispensaries.

At the end of Fourth Plan, there were 35 veterinary hospitals and 12 dispensaries to provide medical care. Out of 47 hospitals/dispensaries, 22 were located in the rural areas. For the Fourth Plan, an outlay of Rs. 70 lakhs was approved for various schemes of animal husbandry against which about Rs. 90 lakhs were utilized. Two mobile dispensaries were converted into permanent hospitals, and seven outlying dispensaries after their conversion into hospitals were put under the charge of veterinary surgeons. Diseases, particularly rinderpest, were kept under control with the check-post measures. Ten veterinary dispensaries were set up in newly established dairy colonies.

In 1984-85 there were 45 veterinary hospitals and 16 veterinary dispensaries. These were managed by Delhi Admn., M.C.D. and N.D.M.C. under the over all administrative control of Animal Husbandry Department of the Delhi Administration. (For details see Appx. IX). The Delhi Municipal Corporation maintains the following veterinary hospitals and dispensaries:

Veterinary Hospitals

1. Tis Hazari
2. Nangloi
3. Najafgarh
4. Bijwasan
5. Alipur
6. Narela
7. Tihar
8. Mehrauli
9. Shahdara
10. Bawana
11. Dhansa
12. Badli
13. Palam
14. Pehladpur
15. Badarpur
16. Jharoda Kalan
17. Daulatpur

Outlying dispensaries

1. Karwal Nagar
2. Qutabgarh
3. Ghitorni

New Delhi Municipal Committee maintains one veterinary hospital at Moti Bagh. Delhi Administration maintains 10 veterinary hospitals as follows:

Urban	**Rural**
1. Karol Bagh	1. Madanpur Khadar
2 Bhogal	2. Patparganj
3. Azadpur	3. Mehpalpur
4. Jheel Khuranja	4. Tikri Kalan
5. Arjun Nagar (Green Park)	5. Singhu
	6. Chirag Delhi
	7. Fatehpur Beri
	3. Kanjhawala
	9. Kapashera
	10. Burari

The services provided at these hospitals are not satisfactory because they lack facilities for surgical and gynocological operations, X-Ray and accommodation. The quality of service is being improved through construction of hospital buildings and by providing them with latest scientific equipment. For emergency cases, provision of telephone service has also been made at the hospitals. Dairy colonies at Ghazipur and Masoodpur were selected for construction of hospitals and staff quarters in 1980-81.

Control of Epidemics

Cattle population is protected against contagious diseases by timely vaccination. Sick animals are treated at veterinary hospitals. For the diagnosis and control of disease, a diagnostic laboratory has been set up at veterinary hospital, Moti Bagh, New Delhi.

Rinderpest or cattle plague, the dreaded epidemic which proves fatal in 90 per cent cases, has been completely eradicated after intensive vaccination.

Haemorrhagic septacaemia is a seasonal disease of low lying areas. It infects foot and mouth. Protective vaccination has been developed against this disease.

Piggery

Earlier the pigs were only kept by Harijans in the villages. Recently a few pig farms have come up with improved varieties of pigs like white yorkshires. For the improvement of local breed, boars of improved quality are supplied to the breeders by the Government free of cost. There is a piggery unit for breeding boars at the Government Poultry Farm. Loans were given to Harijans for opening pig cooperative societies. About 20-25 boars are distributed annually under this scheme. Due to urbanisation, the organised piggeries have migrated to the adjoining states. The pig population of Delhi declined from 25,000 in 1956 to 12,631 in 1961 and to 10,489 in 1977.

Piggery Production Programme

This scheme was formulated as a Central Sector Scheme in 1977–78 to help such persons who have a unit of 3 cows each. Government subsidy and bank loans were advanced for the purpose. Under the scheme it was proposed to add 2,400 breeding pigs in five years.

Poultry Development

With the growth of population in Delhi the demand for eggs and poultry has been growing. The egg production at the beginning of the Fourth Plan was 62,000 per day. It rose to one lakh per day by the end of the Fourth Plan. During the period 1,240 poultry farmers were trained. The Union Territory has a population of 2.19 lakh birds. There are more than 300 large poultry farms with 8,000 to 9,000 birds each, besides many units of backyard poultry. The ancillary industries of poultry have also sprung up.

Government Poultry Farm

The nucleus of poultry development in the Union Territory of Delhi is the Government Poultry Farm. This farm was started by the Army in 1943. It was taken over by Delhi Administration in 1946. It had 34 acres of land, 32 brooder houses, 3 chick rearing sheds and 46 modern poultry houses, incubator rooms and class rooms. The incubation is done in electrically-run-incubators and the farm has a capacity of incubating 46,000 eggs at a time.

In the beginning of Fourth Plan sexless chicks were distributed to the breeders at the rate of rupee one per chick Later on sexed chicks were also distributed to breeders. The strength of layers at the farm was raised to 5,000 during the Third Plan. It was also proposed to raise the poultry farm to 10,000 layers. The demand of three lakh chicks was met from the hatcheries set up by famous poultry organisations like Arhor-Acor, Unichije and Hyline.

A large number of poultry farms have come up in the private sector. Poultry Cooperative Estate at Ujwa is a pioneer in this field. The Estate made a beginning with 4,000 birds and three poultry sheds. Now it has 24 sheds. The UNICEF has donated equipment worth Rs. 60,000 to the farm and the Estate donates 480 eggs daily for feeding nursing mothers and children free of cost under the applied nutrition programme.

Loan to Private Poultry Breeders

The poultry breeders have been advanced loans for establishing large or small farms to rural areas. A sum of Rs. 1.5 lakhs was given on this account during the Third Plan. During the Fourth Plan loans worth Rs. 17 lakhs were distributed, through the Block agencies and utilized for the constuuction of sheds and purchase of birds. Loans upto Rs. 7,000 were provided to poultry breeders.

Supply of Poultry Feed

The poultry programme received a setback in 1963 due to acute feed shortage. But since 1965, poultry feed is developing into a flourishing industry. The World Food Programme contributes 400 tons of maize annually. The Delhi Administration has set up a poultry feed plant by advancing a loan to Delhi Consumer Cooperative Store. It is producing eight to ten tons poultry feed daily. Recently more firms have taken up the poultry feed production.

Marketing of Poultry Produce

The Delhi Consumers Cooperative Store deals with the marketing of poultry produce in Delhi. In the Fourth Plan a loan of Rs. 1 lakh was given to the Store to increase its marketing capacity.

Disease Control

The deadly diseases of poultry are ranikhet, fowl pod, tick fever and cocidiocis. Many farms have been closed due to these epidemics. Ranikhet has now been controlled with vaccination. Effective Chemotherapy is used to combat cocidiocis. But with the introduction of hybrid birds from foreign countries, some new diseases like the chronic respiratory disease have also come in. This disease, though not fatal, is harmful to the industry.

A laboratory to diagnose the disease of poultry birds has been set up at Moti Bagh. Here prophylactic vaccination against deadly poultry disease is carried out. Post-mortem, blood examination, faecal examination and treatment of birds is also done. The performance of the laboratory during the Sixth Plan is given below:

Test or treatment	No.
Post mortem	4,968
Faecal examination	2,844
Blood examination	2,462
Treatment	3,780
Vaccination RKD	17,14,800
Vaccination F/Pox	5,44,500

Broiler Chicks Production

The demand for commercial day-old broiler chicks in the Union Territory of Delhi is much higher than the supply. A few hatcheries exist in private sector but these are hardly sufficient to meet the growing demand. To cope up with the situation the Government Poultry Farm is being expanded and strengthened. During 1979-80 about one lakh chicks were produced under this programme. In 1980-81 the number increased to 2.50 lakh broiler chicks

Marketing of eggs

The demand for eggs in the Union Territory is increasing rapidly. With a view to protect the interest of both consumers and poultry producers, it is proposed to undertake the marketing of eggs through the Rural Development Corporation.

Dairying

Delhi is not self-sufficient in milk and milk products. Large quantities of *milk are, therefore, imported in Delhi from distant states like Gujarat. Delhi Milk Scheme and Mother Dairy cater to milk needs of Delhi. Rural milk producers have an assured market for their products in Delhi city.*

Delhi Milk Scheme was started on Ist November, 1959. The broad aim of the project was reorganisation of milk trade in the city with a view to assuring a remunerative market to the rural milk producers on the one hand and supply of good wholesome milk and milk products at reasonable price to the consumers on the other. The following table indicates various activities of Delhi Milk Scheme:

Table-28

The Growth of Delhi Milk Scheme

Description	1971	1980	1981	1982	1983	1984
1. Number of milk depots	1,018	1,058	1,095	1,074	1,115	1,137
2. Procurement of milk (Daily average) (K. lit.)	177	146	81	134	101	279
3. Distribution of milk (Daily average) (K.lit.)	270	268	304	335	311	327
4. Sale of by-products (monthly average)						
Butter (Qtls)	81	39	26	59	157	1,236
Ghee (Qtls)	388	572	195	185	210	289

Mother Dairy is another public-sector undertaking established by the Indian Dairy Development Corporation. It has milk booths all over Delhi. Mother Dairy is producing various milk products as indicated in the following table:

Table-29

The Growth of Mother Dairy

Description	Unit	1980–81	1981–82	1982–83	1983–84	1984–85
1	2	3	4	5	6	7
Bulk vending booths	No.	293	300	301	302	302
Shops selling polypack milk	,,	175	173	201	230	230
Insulated tanks	,,	203	254	300	285	284
Daily average of milk collected (in K. Liters)						
(a) Mixed milk	K. Lit.	177	116	161	153	174
(b) Cow milk	,,	34	32	57	100	109
(c) Skim milk	,,	22	5	39	13	31
Monthly average cost price of milk (Rs. per Hecto Ltr.)						
(a) Mixed milk	Rs. per hect. Ltr.	244	295	334	358	422
(b) Cow milk	,,	211	244	304	315	363
(c) Skim milk	,,	119	129	165	148	211
Daily average milk marketed	K.Lit.					
(a) S.T.D. Milk	,,	349	463	—	—	—
(b) Full cream	,,	38	26	36	67	81
(c) Tonned milk	,,	—	470	498	510	539
(d) Cow milk	,,	3	3	—	—	—

(Mother Dairy, Patpar Ganj, Delhi.)

Development of dairy colonies in rural Delhi

A scheme for the development of 7 dairy colonies was approved by the Ministry of Agriculture for implementation by the Delhi Municipal Corporation in rural Delhi at a cost of Rs. 35 lakhs. D.D.A. also set up 3 dairy colonies in rural areas during 1976-77. With a view to comprehensive dairy development and to provide employment to the landless and marginal farmers a revised scheme was formulated involving a total cost of Rs. 10.9 crores (6.5 crores by M.C.D. and Rs. 4.4 crores by D.D.A) for the development of 10 dairy colonies with 61,214 cattle. The details of these colonies are as follows:

Table-30

Dairy Colonies in Union Territory

S. No.	Colony/village	Area (in acres)	Capacity (No. of cattle	Estimated cost (Rs. in lakhs)
A.	**M.C.D.**			
1.	Goela Khurd	105.00	9,360	129
2.	Kakrala	16.50	2,720	40
3.	Nangli-Sakrawati	55.00	4,800	79
4.	Jharoda	13.88	2,330	31
5.	Bhalswa	60.00	6,640	79
6.	Sahibadbad Daulatpur	39.50	4,740	48
7.	Gharshi	231.00	13,400	246
	Sub-Total (a)	520.88	43,990	652
B.	**D.D.A.**			
1.	Masoodpur	26.00	2,736	103
2.	Madanpur Khadar	17.00	2,200	69
3.	Gazipur	205.00	12,288	268
	Sub-Total (B)	248.00	17,224	440
	Total	768.88	61,214	1,092

(Planning Department, Delhi Administration)

Delhi Live-stock Products Processing Corporation

In order to process live-stock products, Delhi Live-stock Products Processing Corporation is being set up. The Corporation, besides other functions, will take up the construction work of a new slaughter house on modern lines.

Fisheries

The fishery resources of the Union Territory are divided into following two categories:

(a) 35 kms. of riverine tract, 40 km. of its flooded channels and parts of Agra, Yamuna and Hindon canals traversing through the Union Territory.

(b) Ponds, tanks and *jheels* covering an area of 4,000 hectares.

Considerable progress was made in fishery development between 1951 and 1971 is shown in table below:

Table-31

Fisheries Development in Delhi

Year	Block level (hectares)	Rivers & canals (in km.)	Jheel fisheries (hectares)	Revenue from river & canal fisheries (thousand Rs.)
1	2	3	4	5
1951–62	9	106	....	33.4
1960–61	39	106	....	63.4
1961–62	39	106	....	52.9
1962–63	39	106	....	56.6
1963–64	41	106	3,000	56.4
1964–65	44	106	3,000	68.3
1965–66	49	106	3,000	98.2
1966–67	49	106	3,000	92.5
1967–68	51	106	3,000	88.0
1968–69	53	106	3,000	120.3
1969–70	53	106	3,000	132.4
1970–71	53	106	3,000	124.0

At the time of creation of Delhi District in 1912, fishing was done only in river Yamuna. Fishing was indiscriminate and there was no consideration for conservation. The conservation system was introduced under the post-war reconstruction programme. It was later integrated with "Grow More Food Campaign" in 1947. As a measure of development of fish resources rules were framed under the Punjab Fisheries Act, 1914 and Indian Fisheries Act, 1897. Under the rules fishing in public waters in the Union Territory of Delhi is prohibited except under a licence. Water resources have been classified into different categories depending upon the water area and the type of angling permitted. A water stretch of about six kilometres in Okhla area is reserved for amateur angling only.

The scope of this Act was further extended to the cultivation of fish in village ponds and tanks. The programme envisaged exploitation of reclaimed area and improvement of ponds for fish culture to augment production. But this hardly meets 20 per cent of the requirement of the Union Territory. The balance is met by imports from Haryana, Punjab and Rajasthan and even Gujarat and Bombay.

Intensive fishery development programme has been launched in rural areas of the Union Territory to increase fish production. Village tanks are stocked with fingerlings to produce fish in waste water. Under this scheme a survey was conducted to ascertain the physical, chemical and biological characteristics of water at various places in rural areas. Guidance was given to villagers in fishery development. *Jheel* fisheries are also being developed to the maximum possible extent.

Fish Production

The total production of fish in Delhi during 1969–70 was 184 tons valued at 5.5 lakhs. The production reached 2,050 tons in 1984-85. The gradual increase in tonnage is reflected in the following table:

Table-32

Growth of Fish Production in Delhi

Year	Fish Production (in tons)	Estimated Cost (Rs in lakhs)
1969–70	184	5.50
1971–72	190	9.50
1972–73	200	10.00
1973–74	220	12.00
1974–75	275	15.50
1975–76	350	16.00
1976–77	400	18.50
1977–78	500	20.00
1984–85	2,000	N.A.

(Fisheries Department, Delhi Administration.)

The fisciculture is being encouraged by enforcing conservation rules and by adopting scientific methods for development. As a result of these efforts, the production of fish increased from 184 to 220 tons during the Fourth Plan. The production of fingerlings increased from 2.0 lakhs to 5.2 lakhs in the same period. In 1973–74, 5.2 lakhs of fish seed was distributed, as against 1 lakh in 1969–70.

In the Fifth Plan, it was envisaged to increase the production of fish from 220 to 600 tons. It was also proposed to develop 400 hectares of nursery area and to distribute one million fingerlings. At the end of 1978–79 the production had reached 600 tons.

Table-33

Achievement in Fisheries Development

Item	1974–75	1975–76	1976–77	1977–78	1978–79	1984–85
1	2	3	4	5	6	7
(a) Fingerlings distributed (lakhs)	5	6	7	9	10	22
(b) Fish seed farms established (nos)	—	1	1	1	—	—
(c) Fish production (000 tons)	240	350	400	510	600	2200
(d) Nursery area developed (hectares)	3	150	200	200	200	250

(Development Department, Delhi Administration.)

With the implementation of various programmes the fish production is expected to reach 3,000 M.T. during 1989–90. The production of fish seeds is also likely to reach 30.00 lakhs by the end of Seventh Plan.

Extension, Education and Training

Government of India has opened many training centres to educate people in pisciculture. The latest techniques are taught to people by the extension staff. There are 4 fish seed farms in Delhi located at Barwala, Shahdara, Sarai Pipalthala and Wazirabad for the development of inland fisheries

During the Sixth Plan the following programmes were undertaken with a view to fishery development.

(a) Establishment of experimental fish farm.

(b) Reclamation of derelict waters.

(c) Experiments on the development of live fishes.

The main objective is to expand the existing seed farms and to produce fish seed of fast growing varieties. Steps have also been taken to end water pollution to protect the fish.

Rural Development Agencies

Initially the rural development work was done by the Marginal Farmers and Agricultural Labourers Development Agency and subsequently by Small Farmers Development Agency. In 1979–80 it was renamed D R D A with the responsibility of implementing Integrated Rural Development Programme (IRDP).

Besides executing the I R D P, it is engaged in implementating schemes like National Rural Employment Programme, Assistance to Small and Marginal Farmers, Rural Landless Employment Guarantee Scheme and Development of Women and Children programme.

Under I R D P, introduced in 1980 the beneficiary family is provided a project subsidy of 25% or 33⅓% depending upon the status of the family or Rs. 3000 whichever is less. The financial institutions grant loans to these families so that they can start useful business. To identify the poor families, a house-hold survey was conducted in 1981. At the end of 1984-85 the number of such families, including 8,790 scheduled caste families, was 31,493.

Table-34

Number of indentified Families

S. No.	Name of Block	Small farmers	Marginal farmers	Agricultural labourers	Total
1	2	3	4	5	6
1.	Alipur	513	1,268	6,255	8,028
2.	Kanjhawla	510	2,183	3,354	6,047
3.	Mehrauli	196	583	6,789	7,568
4.	Najafgarh	500	2,143	3,902	6,553
5.	Shahdara	75	627	2,602	3,314
	Grand Total	1794	6,804	22,902	31,498

(Delhi Rural Development Agency)

During the Sixth Plan 16,845 families were assisted under this scheme. Unemployment or under-employment is still a big problem in rural Delhi. To overcome this, National Rural Employment Programme (NREP) was launched with three basic objectives:-

(i) To generate additional gainful employment for the employed and underemployed persons in rural area.

(ii) To create durable community assets for strengthening rural infrastructure, leading to growth of rural economy and rise in income level of rural poor.

(iii) To improve nutritional status and living standard of the rural poor.

This programme is totally financed by the Central Government. During 1984-85, an allocation of Rs. 16 lakhs was made to generate employment of 20,000 mandays in the plantation of 20,000 trees. Both the targets were achieved in full as 23,720 mandays of employment was generated and 40,350 trees were planted.

The DRDA is also implementing Rural Landless Employment Guarantee Programme with two basic objectives:

(i) To provide employment opportunities to rural landless so that atleast one member of every landless labour household is assured employment upto 100 days in a year.

(ii) To create durable assets for strengthening the rural infrastructure leading to rapid growth of rural economy.

In rural Delhi, majority of the land holders are small and marginal farmers. For their uplift, a programme Assistance to Small and Marginal Farmers for increasing agriculture production was started in 1983 with following components :

(a) Minor Irrigation

(b) Plantation of fruit and/or fuel trees.

(c) Land development and distribution of mini kits.

Under this scheme a subsidy of 25% to 33⅓% is given to small farmers and marginal farmers respectively for taking up schemes under the first two components. During 1984–85 and 1985–86 an allocation of Rs 25 lakh each was approved under this scheme. Some more agencies engaged in agriculture development and rural uplift are described below:

Small Farmers Development Agency

The agency was created to bring the benefits of economic development to the weaker sections of the rural community such as small farmers, marginal farmers and agricultural labourers. Farmers possessing unirrigated land upto 2 hectares or irrigated land up to one hectare were covered under this scheme. Agricultural labourers included those who earned 50 per cent or more of their income from hired work in agriculture. These categories were allowed subsidised loan for the following activities:

(i) Installation of tube-wells, pumping sets and wells

(ii) Purchase of milch cattle

(iii) Purchase of storage bins

(iv) Establishment of poultry units

(v) Levelling of land

(vi) Training of artisans

(vii) Custom service

(viii) Soil conservation

The subsidy rate was 25 per cent for small farmers and 33⅓ per cent for marginal farmers and agricultural labourers.

During 1972–73 Rs. 6 lakhs were released by the Agency as **grant-in-aid, out of** which Rs. 5.25 lakhs were given to 667 marginal farmers. Rs. 8.72 lakhs were given as credit through the banks. By the end of 1978–79, a total of 21,676 families had been identified under the scheme. These included 4,390 small farmers, 6,518 marginal farmers and 10,768 agricultural labourers (50 per cent of them being scheduled caste). For community development programmes 50 per cent subsidy was provided by this Agency. The Animal Husbandry Department launched a scheme to give two milch cattle to each individual to increase his income. For this purpose a loan upto Rs. 6,000/– was provided. Subsidy upto Rs. 500 was given for poultry and piggery units. The Agency gave a stipend of Rs. 50/– for training small and marginal farmers and agricultural labourers in various trades. After training, a subsidy upto Rs. 500 in the shape of implements was provided to enable them to set up their own business. During 1977–78, assistance was given to 2,895 small and marginal farmers and agricultural labourers under the SFDA Programme.

Table-35

Loans and Subsidies Advanced under SFDA Programme

Programme	No. of Beneficiaries	Subsidy (Rs. in lakhs)	Loan (Rs. in lakhs)
(A) Agriculture			
1. Inputs	98	0.06	—
2. Crop loan	217	0.34	1.71
3. Levelling of land	41	0.07	—
4. Demonstration farm	800	0.98	—
5. Storage bins	224	0.21	—
6. Fertilizers	–	0.26	0.87
(B) Minor Irrigation			
1. Tubewells	22	0.31	1.00
2. Pumpsets	4	0.04	0.15
(C) Animal Husbandry			
1. Milch cattle	1,467	13.43	41.35
2. Poultry units	4	0.04	0.18
3. Piggery unit	4	0.05	0.14
(D) Rural Industries			
1. Training	13	0.11	—
2. Agro-industries	1	0.03	0.13
(E) Administration	—	1.90	—
Total	2,895	17.83	45.53

(Small Farmers Development Agency)

During 1978–79 Rs 96.75 lakhs as loan and Rs. 45 lakhs as subsidy was given to 9,000 families by SFDA. During 1979–80, the Agency gave Rs. 10.8 lakhs

as subsidy to 1,333 persons. It also arranged loans worth Rs. 28.87 lakhs for them through nationalised banks.

Originally S F D A was a centrally sponsored project. But since 1979, as per the decision of National Development Council, the expenditure on S F D A Programme is shared on 50:50 basis between the central and the state Governments. An outlay of Rs. 12.50 lakhs was made by Government of India for 1979-80. For 1980-81 the Planning Commission did not agree to any outlay under this scheme.

Farmers Training and Education Scheme

The Scheme was taken up in 1968 for imparting training to farmers in mechanised cultivation and use of fertilizers, pesticides etc To this end a training centre was set up at Alipur farm. Under this scheme 80 specialised training courses were held upto 1972-73 and 2000 farmers were trained. Twenty more courses held in 1973-74 trained 500 farmers. 487 production-cum-demonstration camps were organised on farming land by mobile teams in the same year. 100 more camps were organised in 1973-74. Nearly 15,000 persons were trained during the entire Fourth Plan. In 1974-75, 20 courses were held and 500 farmers received training. 100 such camps were again organised in 1975-76. The progress made under various training programmes between 1974-75 and 1977-78 is given in the following table:

Table-36

Farmers Training Programmes 1974-78

Item	1974-75	75-76	76-77	77-78
1. (a) Short term farmers training camps	10	10	10	10
(b) No. of farmers trained	253	276	250	238
2. (a) Short term female farmers training camps	10	10	10	10
(b) No. of women trained	250	270	260	311
3. (a) Training camps for coordinators of farmers *Charcha Mandals*	4	5	5	5
(b) No. of trained coordinators	32	88	72	48
4. (a) Demonstration and production camps	108	128	170	128
(b) No. of participant farmers	2928	3016	4244	3581
5. (a) Formation of Farmers *Charcha Mandals*	7	7	—	—
(b) No. of farmers	140	140	—	—
6. (a) Formation of Women Farmers *Charcha Mandals*	17	5	4	—
(b) No. of women farmer participants	340	100	88	—

(Development Department, Delhi Administration)

Training of Associate Women Workers

This scheme was launched in 1975–76 to train women workers to supervise the work of *Mahila Mandals*. The broad objectives of the scheme are:

1. Impart technical knowhow about improved farms.
2. Promotion of leadership.
3. Associate women with techniques of group work.
4. Preparing women for effective extension work.
5. Creating awareness on family planning, improved nutrition, vegetable cultivation, backyard poultry, small savings etc.

A budget provision of Rs. 90,000 each for 1979–80 and 1980–81 was made for this scheme. It was proposed to train 90 girls/women in each year of the Five Year Plan.

Incentive to Mahila Mandals

This scheme was started in 1975–76 with a view to encourage *Mahila Mandals* to improve their performance and generate a spirit of healthy competition among them. The performance is judged by various committees set up for the purpose.

Rural Development Corporation (RDC)

To create employment opportunities through the development of agriculture and allied industries in villages the Development Department of Delhi Administration has set up a Rural Development Corporation. The main objectives of the RDC are as follows:

(a) Supply of agricultural inputs
(b) Diversification of agriculture through encouragement of allied activities
(c) Provision of marketing and storage facilities
(d) Establishment of agro-industries
(e) Organisation of service centres
(f) Coordination of planned effort for integrated development
(g) Improvement of environment in rural areas
(h) Provision, development and improvement of housing facilities
(i) Rural transport

Integrated Rural Development Programme (IRDP)

It was started in three Blocks viz. Alipur, Kanjhawala and Najafgarh on Ist April, 1978 with a view to intensify rural development activities for generating additional employment and income. Integrated development means the overall development of a villages covering social, economic, educational and cultural aspects. The success of this Programme depends on the growth of agriculture. The banking plan

under IRD Programme is meant to cover the poor classes comprising small farmers, marginal farmers, share croppers, scheduled castes, scheduled tribes etc.

Block Level Planning

Rural Delhi has been divided into five Blocks, each under the charge of a Block Development Officer. The emphasis on Bock-level-planning is meant to identify the most needy areas for development at the Block level. The following types of activities are planned and implemented at the Block level:

(i) Agriculture and allied activities
(ii) Minor irrigation
(iii) Soil conservation and water management
(iv) Animal husbandry and poultry farming
(v) Fishery
(vi) Forestry
(vii) Processing of agricultural produce
(viii) Organising input supply, credit and marketing
(ix) Cottage and small industries
(x) Local infrastructure
(xi) Social services
  (a) Drinking water supply
  (b) Health and nutrition
  (c) Education
  (d) Housing
  (e) Sanitation
  (f) Local transport
  (g) Welfare programmes
(xii) Training of local youth

The scheme-wise progress of the credit plan for 1979-80 in Blocks is given below:

	Items	Amount disbursed by banks (in lakh)
1.	Crop loans	283.09
2	Tractors	25.20
3.	Tubewells	10.90
4.	Buffaloes	47.45
5.	Cross-breed cows	3.21
6.	Cross breed heipers	4.76
7.	Piggeries	3.96
8.	Fisheries	0.48
9.	Poultry	24.53
10.	Others	84.39
	Total	487.08

The performance of the financial institutions under the IRD credit plan during 1979–80 is indicated below:

	Name of Institution	Amount (Rs. lakhs)
1.	Delhi State Cooperative Bank	308.49
2.	State Bank of India	19.87
3.	Allahabad Bank	15.56
4.	Syndicate Bank	14.50
5.	Bank of India	5.38
6.	Punjab National Bank	6.11
7.	Central Bank of India	6.88
8.	Union Bank of India	6.69
9.	Punjab & Sind Bank	2.65
10.	New Bank of India	5.21
11.	Vijay Bank	6.32
12.	Dena Bank	1.50
13.	Traders Bank	4.42
	Total	403.58

Training of rural youth for self-employment (TRYSEM)

With the agricultural land fast diminishing, the rural youth need to be absorbed in avocations other than agriculture. TRYSEM has been launched by the Government with this end in view. The effort is to equip the rural youth with necessary skills to seek self-employment. (For details see chapter on Industry)

Plan Performance

During the First Five Year Plan Rs. 66.82 lakhs were spent on agriculture out of the total expenditure of Rs. 470.31 lakhs on the plan schemes of Delhi. During the Second Plan, the expenditure on agriculture and Community development schemes was 5 per cent of the total expenditure of Rs. 1,536.79 lakhs. In the third plan, agriculture got 1.3 per cent of the total outlay of Rs. 9,826.98 lakhs. Agricultural programme and community development as a whole got Rs. 203.96 lakhs i.e., about 2 per cent.

In the plans, the main emphasis was laid on extension of irrigation, use of fertilizers and improved seeds, expansion of vegetable cultivation etc. During 1951–1969 a total of Rs. 2.9 crores was spent on various agricultural programmes. During the Fourth Plan (1969–74) Rs. 2.74 crores were spent on agriculture and allied services. During the Fifth Plan (1974–78) the expenditure on agriculture and allied services rose to Rs. 8 crores and 10 lakhs. In Sixth Five Year Plan (1980–85) an outlay of Rs. 19 crores and 10 lakhs was made for agriculture. The year-wise progress of plan ex-

penditure during Sixth Plan and approved outlay for Seventh Plan (1985–90) is given below:

Table-37

Agriculture-Approved Outlay and Expenditure Sixth-Five Year Plan

S.No.	Sub-head	Approved outlay 1980–85	Expenditure 1980–83	1983–84	84–85	Outlay 85–90
1.	Agriculture	453.40	171.73	60.72	70.81	453.40
2.	Minor irrigation	200.00	124.02	61.94	138.18	519.00
3.	Soil conservation and forest	181.00	40.89	28.08	33.59	181.00
4.	Food	500.00	41.00	180.00	84.00	10.00
5.	Animal husbandry	288.00	141.58	48.17	55.47	288.00
6.	Dairy development	150.00	135.00	5.00		150.00
7.	Fishery development	80.00	31.06	10.76	8.57	60.00
8.	CD & *panchayats*	78.15	25.36	13.65	24.14	166.00
	Total	1,930.55	710.64	408.32	414.76	1,827.40

(Planning Department, Delhi Administration.)

Owing to the efforts of the Administration and implementation of various programmes, great progress was made in agriculture during early eighties as reflected in the following table:

Table-38

Progress in Agriculture in Eighties

S.No.	Item	Unit	1980–81	1984–85	Target 1985–86
1	2	3	4	5	6
1.	Production of food grains	oooMT	142.64	142.00	165.00
2.	Vegetable production	-do-	365.00	501.15	3078.40
3.	Chemicals & fertilizers	-do-	5.25	7.20	14.00
4.	Area under high yielding varieties	ooo Hect.	57.92	59.40	73.00
5.	Sludge manure distribution	-do-	34.68	40.00	200.00
6.	Area under plant protection	-do-	163.00	180.00	150.00
7.	Public tubewells installed	-do-	157.00 (*amulatine*)	162.00	N.A.
8.	Plantation of trees	oooNos	341	339.00	1500.00
9.	Milk production	oooMt	157	182.00	220.00
10.	Fish production	oooMt	1.20	2.20	3.00

APPENDIX—I

Land Utilisation : Delhi

(*in hectares*)

	Classification	1950-51*	1960-61	1970-71	1974-75	1975-76	1976-77	1983-84
1.	Area according to village papers, professional survey	1,48,012	1,47,952	1,47,612	1,47,488	1,47,488	1,47,488	1,47,488
2.	Forests	18	1,415	11,43	1,559	1,434	1,434	1,434
3.	Area not available for cultivation	32,236	34,496	47,314	48,975	48,865	47,164	64,808
4.	(a) Land put to non-agricultural uses	..	33,469	34,207	37,179	34,868	35,317	54,150
	(b) Barran uncultivable land	..	1,027	13,107	11,796	10,997	11,847	10,779
5.	Other Uncultivated Land excluding fallow land	20,310	18,138	3,602	2,571	2,228	1,797	4,422
	(a) Permanent pasture and other grazing land	..	4,863	402	689	448	448	793
	(b) Land under Misc. tree crops and groves not included in net area sown	..	..	41	467	900	734	1,137
	(c) Cultivable waste land	—	13,275	3,159	1,415	880	615	3,492
6.	Fallow land	4,566	6,497	15,043	16,537	15,276	14,710	10,793
7.	Area sown	90·882	87,406	80,512	77,846	82,685	82,383	62,653
8.	Area sown more than once	..	26,076	36,076	35,511	36,835	33,456	26,454
9.	Total cropped area	..	1,13,482	1,16,585	1,13,357	11,950	1,15,839	89,107

.. Not available. *Relating to the year 1949-50.

(Development Department, Delhi Administration, Delhi, Delhi Statistical Hand Book, Bureau of Economics and Statistics-Delhi Administration.)

APPENDIX—II

Distribution of Cultivators According to the Size of Holding

S.No.	Size of holding	Total No. of sampled cultivators					Percentage to the total				
		64–65	65–66	66–67	67–68	68–69	64–65	65–66	66–67	67–68	68–69
1	2	3	4	5	6	7	8	9	10	11	12
1.	Upto one hectare (0–2.5 acres)	44	61	73	68	70	9.2	12.9	15.3	14.3	14.7
2.	1–2 hectares (2.5 to 5.0 acres)	57	72	76	72	69	11.9	15.2	16.0	15.0	14.5
3.	2–4 hectares (5.0 to 9.0 acres)	150	160	157	145	140	31.2	33.5	33.0	30.4	29.4
4.	4–8 hectares (9.9 to 19.8 acres)	148	123	125	136	149	30.8	25.8	26.3	28.5	31.3
5	Above 19.8 acres)	81	61	45	56	48	16.9	12.8	9.4	11.8	10.1
	Cumulative Percentage										
1.	Upto one hectare (very small)	9		13		15		14		15	
2.	1–2 hectare (small)	21		28		31		29		29	
3.	2–4 hectare (medium)	52		61		64		59		59	
4.	4–5 hectares (large)	82		87		90		88		90	
5.	Above 8 hectares (very large)	100		100		100		100		100	

APPENDIX—III

Number of Operational Holdings and Area Operated by Size Class of Holdings

(Area in hectares)

S.No.	Size Class	Individual Holdings				Joint Holdings	
		No.		Area		No.	
		70–71	76–77	70–71	76–77	70–71	76–77
1	2	3	4	5	6	7	8
1.	Below 0.5	4983	6975	1264.74	2015.89	3695	3122
2.	0.5– 1.0	2785	2735	2217.42	1894.17	2384	1932
3.	1.0– 2.0	2921	3009	4291.24	4373.59	2841	2530
4.	2.0– 3.0	1575	1835	3943.32	4433.83	1771	1694
5.	3.0– 4.0	1153	1182	4064.17	4069.06	1325	1258
6.	4.0– 5.0	720	859	3208.06	3834.85	945	876
7.	5.0–6.0	1292	1439	8844.60	9456.15	2124	1860
8.	10.0–20.0	372	250	4863.30	3015.53	834	607
9.	20.0–30.0	35	15	811.64	307.34	116	75
10.	30.0–40.0	7	1	243.81	34.49	27	12
11.	40.0–50.0	2	1	91.79	44.17	10	9
12.	50.0 and above	6	—	768.56	—	19	12
	All sizes	15848	18301	34612.65	33479.77	16109	13987

Total Holdings

Area		No.		Area	
70–71	76–77	70–71	76–77	70–71	76–77
1084.70	780.96	8678	10097	2349.44	2796.86
2017.93	1394.35	5166	4667	4235.35	3289.22
4415.15	3662.09	5762	5539	8706.39	8035.68
4494.74	4089.52	3346	3529	8438.06	8523.35
4684.16	4115.91	2478	2440	8748.33	8184.97
4235.55	3863.14	1665	1735	7443.61	7697.99
15060.24	13114.02	3434	3299	23904.84	22570.17
1200.23	7871.33	1206	857	16063.53	10886.86
2777.50	1627.08	151	90	3589.14	1934.42
895.47	414.16	34	13	139.28	448.89
491.47	385.72	12	10	583.29	429.89
1490.94	1287.15	25	12	2259.50	1287.15
52848.11	42605.43	31957	32288	87460.76	76085.20

APPENDIX—IV

Percentage Area Benefitted by FYM/Compost and Different Chemical Fertilizers and their Average Rate of Application per hectare in the Year 1969–70

(Polled overall)

F.Y.M./ Compost or kind of Chemical fertilizer	Percentage area benefitted under						Average rate of application in Kg. of F.Y.M./ compost and kg. of nutrients of chemical fertilizers					
	Bajra	Maize	Wheat	Vegetable	Other grain crops	Other crops	Bajra	Maize	Wheat	Vegetable	Other food grain crops	Other crops
1	2	3	4	5	6	7	8	9	10	11	12	13
F.Y.M. or Compost	35	47	35	14	17	23	26,156	25,747	21,083	40,057	18.863	32,581
Nitrogenous fertilizers	31	37	70	41	6	36	5.22	32.6	34.0	44.4	20.4	34.9
Phosphatic fertilizers	1	—	5	2	—	1	32.2	65.9	44.3	42.8	—	43.1

APPENDIX—V

Cultivation Commandable Area in Delhi

S.No.	Name of Channel	Year 1922		Year 1968		Year 1978	
		Length (feet)	Area (acres)	Length (feet)	Area (acres)	Length (feet)	Area C.C. (acres)
1	2	3	4	5	6	7	8
1.	Delhi Tail Distributory	90,500	17,419	90,600	15,932	90,600	15,932
2.	Nehri Major Distributory 27000 to Tail 35000	38,000	—	38,000	5,922	32,000	5,922
3.	Bawana Distributory 8.2 to Tail	29,095	3,451	23,446	3,386	23,446	3,386
4	Uchandi Minor of Bawana Distributory	28,300	4,795	28,335	5,278	38,335	5,278
5.	Budan Pur Minor of Bawana Distributory	29,085	3,166	30,625	3,035	30,625	3,035
6.	Mundka Minor of Bawana Distributory	40,800	10,862	65,885	18,411	65,885	18,411
7.	Sultanpur Minor of Bawana Distributory	46,835	8,621	46,835	7,829	46,835	7,829
8.	Holambi Minor of Delhi Tail Distributory	3,066	2,115	3,226	2,214	3,226	2,214
9.	Mungeshpur Minor of Delhi Tail Distributory	23,650	6,617	23,650	4,332	23,650	4,332
10.	Shkurpur Minor of Delhi Tail Distributory	5,400	1,671	5,400	871	5,400	871
11.	Wazirpur Minor of Delhi Tail Distributory	11,840	1,616	11,840	1,606	11,840	1,606
12.	Alimerdan Minor of Delhi Tail Distributory	2,731	817	2,731	758	2,731	758
13.	Jaunti Minor of Pai Distributory 33 to Tail	7,895	,,	7,895	4,390	2,895	4,390
14.	Lampur Distributory 7 to Tail	11,800	4,937	12,432	5,993	12,432	5,993
15.	Dhansa Minor	,,	,,	33,637	6,823	33,637	6,823
16.	Surakhpur Minor	,,	,,	18,270	4,415	18,270	4,415
17.	1-L of Surakhpur Minor	,,	,,	Tail o/LS	1121	Taiol o/LS	1,121
18.	2-L of Surakhpur Minor	,,	,,	9,500	1,215	9,500	1,315
	Total	3,77,697 64.93 Canal miles	66,087 (26,744) hectares	4,62,307 95.34 miles	93,529 (37,773) hectares	4,62,307 95.34 miles	93,529 (37,773) hectares

C.C. Area-Commandable Area Cultivable

(Deputy Commissioner of Delhi.)

APPENDIX—VI

Estimated Number of Operational Holdings Receiving Irrigation and Area Irrigated by Different Sources

Size class	Total Holdings		Canals		Tanks	
	Number	Area	Number of holdings	Area irrigated	Noumber of holdings	Area irrigated
1	2	3	4	5	6	7
Below 0.5	10097	2796.85	1101	252.29	5	1.43
0.5– 1.0	4667	3289.22	729	451.64	4	2.26
1.0– 2.0	5539	8035.68	858	1089.89	3	3.00
2.0– 3.0	3529	8523.35	536	1248.69	5	5.04
3.0– 4.0	2440	8184.97	442	1184.01	—	—
4.0– 5.0	1735	7697.99	419	1451.30	—	—
5.0–10.0	3299	22570.17	760	3632.22	21	93.14
10.0–20.0	857	10886.86	222	2023.52	—	—
20.0–30.0	90	1934.42	16	302.34	—	—
30.0–40.0	13	448.65	3	9.19	—	—
40.0–50.0	10	429.89	4	59.80	—	—
50.0 and above	12	1287.15	5	79.54	—	—
Total	32288	76085.20	5095	11794.43	38	104.87

Wells		Tubewells		Other Sources		Exclusive net	
No. of holdings	Area irrigated	No. of holdings	Area irrigated	No. of holdings	Area irrigaged	Total No. of holding receiving irrigation	Irrigated area
8	9	10	11	12	13	14	15
78	26.07	3455	1053.85	324	89.92	4900	1423.56
46	24.18	2269	1510.96	254	182.34	3283	2171.38
142	124.18	3449	4372.22	195	241.37	4862	5840.86
142	170.86	2480	4790.95	163	309.15	3204	6524.69
86	170.60	1645	4584.17	119	272.80	2197	6211.58
72	138.18	1107	4199.98	87	234.23	1603	6023.69
216	666.08	2114	12381.83	172	714.28	3093	17487.55
31	148.80	554	5366.31	39	331.31	795	7869.94
5	26.44	70	999.09	3	30.33	83	1358.20
3	14.22	13	223.52	1	1.27	13	248.20
3	21.67	7	221.02	1	3.44	8	305.93
1	3.25	12	752.83	3	37.46	12	873.08
815	1534.53	17175	40456.73	1361	2447.90	23753	56338.46

(Deputy Commissioner of Delhi.)

Appendix-VII

Target of Production and Achivements Seventh, Plan 1985-90

S.No.	Item	Unit	Seventh Plan base year level (1985-86	Seventh Plan (1985-90) Target	Achivements 1985-86	Target 1986-87
1	2	3	4	5	6	7
1.	Production of Food	000 tons				
	GRAINS					
	Paddy	,,	1.47	9.00	7.00	7.00
	Bajra	,,	3.50	8.50	8.00	8.00
	Wheat	,,	130.07	140.00	131.60	132.00
	Jowar	,,	--	—	—	—
	Maize	,,	0.51	0.50	0.50	0.50
	Pulses	,,	5.00	5.00	5.00	5.00
	Other cereals	,,	1.45	2.00	1.00	2.50
	Total		142.00	165.00	153.10	155.00
2.	**Vegetable Produdction**					
	(a) Potato					
	(i) Area	000 hects	2.82	16.40	2.30	2.80
	(ii) Production	000 tons	50.22	303.40	51.80	51.30
	(b) **Other Vegetable**					
	(i) Area	000 hects	35.00	222.00	40.00	44.00
	(ii) Production	000 tons	450.93	2775.00	500.00	550.00
3.	**Chem. Fertilizers**					
	(i) Nitrogeneous	000 tons	5.20	8.00	5.50	6.59
	(ii) Phosphatic	,,	1.20	3.50	1.50	2.00
	(iii) Potassic	,,	0.80	2.50	1.00	1.25
	Total		7.20	14.00	8.00	9.84
4.	**Area under High Yielding Varieties**					
	Paddy	000 tons	2.70	10.00	4.80	6.00
	Wheat	,,	48.00	50.00	49.00	50.00
	Bazra	,,	8.30	11.00	5.75	9.00
	Maize	,,	0.40	2.00	0.50	0.30
	Total		59.40	73.00	60.05	65.30

1	2	3	4	5	6	7
5.	**Sludge/Manure**					
	Distribution	000 tons	40.00	200.00	30.00	40.00
6.	**Seed Production/Distribution**					
	(a) Food Crops	000 tons	65.00	750.00	62.50	120.00
	(b) Others	,,	22.00	165.00	5.00	20.00
7.	**Horticulture**					
	(a) Area under orchards	000 tons	54.00	220.00	34.00	42.00
	(b) Planting of fruit trees	000 nos	22.76	84.50	12.68	15.75
	(c) Export oriented floriculture production programme	000 acres	--	1240.00	500.00	800.00
8.	**Plant Protection**	000 hects	2.25	12.49	2.05	2.07
	(a) Area covered					
	(b) Pesticides/insecticides	000 tons	0.06	0.165	—	N.A.
9.	Net cropped area	000 hects	54.07	72.00	N.A.	N.A.
10.	Gross cropped area	,,	83.05	135.00	N.A.	N.A.
11.	**Area under Minor Irrigation**					
	(i) Ground	000 hects	46.00	1.50	0.20	0.30
	(ii) Surface	,,	3.20	2.00	0.25	0.15
12.	**Soil Conservation**					
	(i) Conservation of agriculture land	,,	0.08	0.40	0.03	0.08
	(ii) Plantation of trees	lakhs	3.39	15.00	2.99	3.00
13.	**Animal Husbandry**					
	(i) Milk Production	000 tones	182.00	220.00	190.00	198.00
	(ii) Eggs Production	millions	67.00	90 00	68.00	72.00
	(iii) Vaterinary Hospital	nos	45.00	45.00	45 00	45.00
	(iv) Vaterinary Dispensaries Centre	,,	16.00	16.00	16.00	16 00
	(v) Artificial Insemination	,,	5.00	5.00	5.00	5.00
	(vi) A.I. Sub-centres	,,	29.00	29.00	29.00	29.00
	(vii) No. of inseminations performed	lakhs	0.106	0.130	0.110	0.115
	(viii) No. of cross breed cows born	lakhs	0.0232	0.0250	0.170	0.018

1	2	3	4	5	6	7
14.	**Fishery Development**					
	(i) Fish production	000 tons	2.20	3.00	2.30	2.40
	(ii) Nursery area developed (addl)	000 hects	2.50	22.00	—	16.00
	(iii) Fingerling production	000 m. tons	2.20	3.00	2.30	2.40

(Planning Department, Delhi Administration.)

APPENDIX—VII

Cattle in Delhi According to Livestock Census

Description 1	1951 2	1956 3	1961 4	1966 5	1972 6	1977 7	1982 8
Cattle							
Male over three years:							
(a) Used for breeding only	321	413	354	139	141	109	941
(b) Used for breeding and work both	446*	483	619	617	31	343	—
(c) Used for work only	34173	34856	31532	27322	19252	14272	8628
(d) Others	—	—	270	133	847	82	—
Total :	34940	35752	32775	28211	20271	14806	9569
Female over three years:							
(a) Breeding cows—in milk on 15 April	17721	18191	19923	15832	15415	12527	17533
(b) Dry cows	10189	8863	9468	7908	6812	4687	4526
(c) Not calved even once, used for work only	3238	1854	700	680	579	387	598
	29	124	75	80	261	62	—
(d) Others	414	233	176	35	654	74	—
Total :	31591	29265	30342	24535	23721	17687	—
Stock		—	—	26559	—	15797	22657
Total cattle	—	—	—	81667	—	48290	19883
Buffaloes:							
Male over three years							
(a) Used for breeding only	251	291	558	196	227	192	1003
(b) Used for breeding and work both	85*	145*	250	592	666	1345	2703
(c) Used for work only	518	589	989	470	192	786	,,
(d) Others	—	—	277	50	432	202	,,
Total	854	1025	2074	1308	1517	2525	3706

Female over three years							
(a) In milk on 15th April	26908	38965	41448	48449	61730	50526	88648
(b) Dry	14219	11021	12060	13405	12884	14929	10542
(c) Not caived even once	3423	2568	1191	1541	951	924	1680
Sub Total :	44550	52554	54699	63395	75515	663579	,,
(d) Used for work only	206	398	497	165	414	67	,,
(e) Others	331	60	893	28	196	545	,,
Total :	45087	53012	56089	63588	76125	66991	100870
Young stock	11434	61192	39219	38415	50563	39408	73024
Total buffaloes	57375	1,15.229	97,382	1,03,410	1,28,205	1,08.924	1,77,600
Sheep	7029	6340	9560	5006	4435	9276	—
Goats	29482	22036	1882	14345	11918	19869	—
Horses and ponies	5831	7281	60400	5165	7744	4356	—
Figs	6553	24828	12631	6053	10889	10489	—
Camels	902	1914	912	2212	818	354	—
Others	11630	8387	6784	5071	5764	4173	—
Total live-stock	2,24,950	3,06,325	2,07,069	2,16,777	2,37,721	2,05,731	—
Poultry	25219	71,527	62,757	1,37,398	3,03,529	2,16,911	—

*Bulls and Bullocks overs 2 years not in use for breeding or work. (Delhi Statistical Hand Boak.)

APPENDIX—IX

Vaterinary Facilities, Delhi

Description	1971–72	1972–73	1973–74	1974–75	1975–76	1976–77	1977–78	1984–85
Hospitals	43	43	43	43	43	43	43	45
Dispensaries	6	6	6	6	9	15	15	16
Doctors*	57	54	53	53	50	50	50	55
Animals treated indoor	6,291	4,866	7,062	13,003	4,482	4,513	5,112	3,597
Outdoor	1,92,603	1,73,369	1,64,209	1,39,721	1,80,530	1,90,704	1,95,786	2,28,315
Castrations	3,872	3,875	3,141	3,079	2,878	2,076	928	1,415
Artificial insemination	2,739	3,135	4,304	2,893	7,619	7,998	8,009	13,787
Sterlity cases treated	790	1,046	1,076	1,044	2,913	5,245	5,538	7,551
H.S.Vaccinations (000)	29	20	14	31	43	40	75	75,304
Rinderpest vaccinations (000)	179	259	220	189	226	242	215	2,27,238
Private clinics	12	14	16	22	24	27	27	35
F.M.P. varium								16,514

*Doctors under Delhi Administration only

(Delhi statistical Hand Book, 1985)

CHAPTER IV

REVENUE ADMINISTRATION

The recorded history of revenue administration in the Union Territory of Delhi is traceable to the times of Sher Shah Suri (1540–1545). Before him, the land was not measured properly and the government share in the produce was based on a rough estimate. Sher Shah conducted an accurate survey of all the lands in the empire and the share of the government was fixed at 1/3rd of the expected produce. The payment could be made to the government either in cash or in kind. The government share was realised with the help of *Muqaddams* who got a percentage for their services. This system of revenue collection was based on just and rational principles. The system was further perfected by Akbar's Minister, Raja Todar Mal. Todar Mal got an aggregate rate of collection for 10 years from 1570 to 1580 and on that basis fixed government share at 1/3rd. Todar Mal also introduced *Jarib* of bamboos buckled with iron rings for the purpose of land measurement. This was more accurate than traditional hemps rope used for measurement. The land revenue system introduced during Akbar's regime was followed by succeeding Mughal emperors. The outlines of the system, however, got blurred when the decline of the Mughals set in.

The administration of Delhi passed into British hands in 1803 when Lord Lake defeated the Marathas in the battle of Patparganj. A British Resident was appointed to administer the Delhi territory in the name of Shah Alam, the Mughal emperor. Shah Alam and his relatives received a share from the revenue to maintain their position.

The Delhi territory was organised into a District of two *parganas* (northern & southern) in 1819. They included the present Delhi *tehsil*, the northern portion of Ballabhgarh and a small portion of the Rohtak district. In 1832, the office of the Resident of Delhi was abolished and Delhi territory was put under the jurisdiction of Sadar Board and Court of Justice at Allahabad.

Between 1848 and 1853, the territory of Delhi had an accretion of 160 villages with an area of 193 sq. miles from the districts of Meerut and Bulandshahar. But as a result of the revolt of 1857, the Delhi district was transferred to Punjab. The estate of the Raja of Ballabhgarh was escheated and was formed into one revenue administrative unit. The outlying villages of the *doab*, hitherto a part of Delhi were transferred to North Western Provinces.

On October 1st, 1912 a separate Delhi Province was constituted by dissolving the Delhi district and transferring parts of Ballabhgarh *tehsil* to the Gurgaon District. The Province was subsequently enlarged by the addition of 65 villages from Meerut

District of the then United Provinces. Thereafter till 1950, Delhi was run as a separate unit of Administration under the Chief Commissioner in accordance with the provisions of Section 58 of the Government of India Act, 1919 and Section 94 of the Government of India Act, 1935.

On 26th January, 1950, Delhi became a part 'C' State. After the enactment of Government of India Part 'C' State Act 1951, Delhi was put under a responsible government. This arrangement did not last long. With the enactment of States Re-organisation Act, 1956, the Union Territory of Delhi came into being on November 1, 1956. The re-organisation did not, however, affect the area of Delhi. At present, the administration is carried on under the provisions of Delhi Development Act, 1957, Union Territories Act, 1963 and the Delhi Administration Act, 1966.

Classification of the Lands

The lands were first divided into two categories viz, (1) *taiul* land i.e. land which was originally owned by the king of Delhi and (ii) *Nazul* land i.e. the remaining crown land or other non-departmental estate lands. This distinction is now obsolete and there is uncertainty about the king's private estates near Delhi. The use of the word *taiul* has, therefore been discontinued. The Delhi crown land denoting property which has descended to Government either as the successor of former Government or by escheat, or in the absence of heirs to legal owners, is called *nazul* land.

With the growth of the city much of the *nazul* land has been taken over for purposes like construction of railway, irrigation canals, public works etc. In such cases it was not called *nazul* land but was treated as government land under departmental management. The other lands within the municipal limits of Delhi were administered by the Municipal Committee on the following conditions:

(i) the Municipal Committee acquired no right to alienate the owners in any way,

(ii) only the management and care of the lands was made over to the Committee,

(iii) the committee was entitled to the income of the properties so long as they continued under the committee's administration and

(iv) the Municipality would pay land revenue to the Government. With the enforcement of the Delhi Development Act, 1957, the management of the *nazul* lands was transferred to the Delhi Development Authority. A small area of agricultural *nazul* land is, however, managed by the Deputy Commissioner. Delhi.

History of Land Revenue Assessment

The early revenue administration of the District was crude and arbitrary. For revenue collection, strong pressure was put on cultivators through subordinate officers like *Tehsildars*. The *zamidars* were forced to maintain *sawars* in the village till the revenue

was paid. This pressure often forced the cultivator to desert the land on the expiry of a short lease. In the beginning of the British rule, the settlement was intended to last for a few years only. There were no regular records and assessment was made on the basis of the sum recovered from the farmers under the native rule. Further the assessment was high and rigid.

First Regular Settlement (1842–44)

The first regular settlement in the three *tehsils* of Delhi district was conducted in 1842–44. The settlement did not, however, cover the estate of the Raja of Ballabhgarh and other Jagirdars. Unfortunately during the revolt of 1857, the records of the settlement were destroyed. The second regular settlement was done from 1872 to 1888. It introduced fluctuating assessment in respect of a few villages affected by the Najafgarh *Jheel* and a dry assessment in the canal villages supplemented by a fluctuating owner's rate. The third settlement was conducted between 1906 and 1910 when record of rights was prepared in accordance with the Punjab Land Revenue Act, 1887. The following assessment circles were fixed:

(i) *Bangar* (flat land from Narela to Nangloi).

(ii) *Dabar* (flood prone areas where rain water often stagnates). This includes most of Najafgarh revenue circles.

(iii) *Kohi* (hilly areas in Mehrauli circle.)

(iv) *Khandrat* (area around Anand Parbat)

(v) *Khadar* (village lands around the river viz. Palla, Kilokri, Okhla etc.)

The soil was classified into the following five categories on the basis of their source of irrigation:

1. *Chahi*-soil irrigated by wells.
2. *Nahri*-soil irrigated by canals.
3. *Salabi*-soil irrigated by floods or kept moist by river.
4. *Abi*-soil watered by tanks, pools, marshes or streams.
5. *Barani*-soil dependent entirely on rain fall.

At the time of Third Revenue Settlement (1910) land was distributed in Delhi district in the following manner:

Cultivating Occupancy:	Percentage
(a) Occupied by owners	56
(b) Held by tenants free of rent	2
(c) Held by occupancy tenants on (i)	9½
cash rent (ii) kind rent	½
(d) Held by tenants-at-will on (i) cash rent	25
(ii) kind rent	7½

The *khudhkasht* lands reduced from 65% in 1888 to 56% in 1910. Tenants holding rent free lands were either Brahmins or menials. The Brahmins were called *dholidars* and the menials *Bhondidars*. The average size of the holdings of tenants with or without occupancy rights was under 2 acres.

Occupancy tenants, held more than 9% of the total land. They paid rent at revenue rates with, or mostly without, additional *malikana*. Many occupancy tenants had nebulous rights. Even *dholidars* and *bhondidars* were occasionally recorded wrongly as occupancy tenants.

32½% of the land was cultivated by tenants-at-will, who usually belonged to the same community as the landlord, or the hereditary tenants. Many tenants-at-will regarded themselves as owners of the land and paid no rent beyond the Government dues.

In respect of the gardens, a curious system known as *sardarakhti* tenure prevailed. A *sardarakhti* was a man, who paid rent to the owner as the tenant of the land, but was the owner of the trees on that land. He paid rent from Rs. 6 to Rs. 8 per acre. But where the quasi-*batai* rent was paid, the land owner received one fourth of the price of fruits sold.

Another rather curious tenure system was *makbuza*. Under this tenure, the state or any public body took possession of the land free of cost for public purposes with the consent of the owner. This tenure originated when waste lands had little value and *zamidars* donated such lands for public purposes.

Occupancy tenants seldom paid produce rents. If these were paid by tenants-at-will, there was generally a local reason for it. The usual rate of *batai* was one-half. On canal tracts, the owner and the tenants shared the Government dues, the cost of seed and the produce according to *batai* rate. The cash rent paid by occupancy tenants was invariably the rent expressed in terms of land revenue. Tenants-at-will, however, paid *chakota* rent which was usually fixed at a rate calculated on the area. Rent in respect of unirrigated land varied from Rs. 1 to 10 annas per *bigha*. Rent in respect of the irrigated land was almost double to that on *barani*. In well irrigated areas, the rent was very high.

Between 1940 and 1954 when the Delhi Land Reforms Act was enforced no major change was introduced in the land revenue system. Minor changes were, however, made in respect of the alluvial lands (subject to fluctuations in the river course).

The land settlement of 1908-10 is still in force in Delhi. But the provisions of Delhi Land Reforms Act, 1954, govern the settlement of land revenue. So far, no revision of land settlement has been undertaken in accordance with these provisions.

However, under the provisions of the Delhi Act, the Lt. Governor is empowered to undertake settlement of land revenue of the whole or part of the Union Territory. Though no settlement has been undertaken since 1908-9, consolidation work, a sort of mini settlement, was conducted soon after independence.

Lal dora connotes that land which is left to the village for habitation purpose and is called *Abadi de*. This land is exempted from land revenue. A committee for the extension of *lal dora* has been constituted by the Delhi Administration.

Principles of Assessment

In assessing the land revenue for a holding, the estimated average surplus produce of such a holding, after deducting the expenses of cultivation, is taken into consideration. The percentage of land revenue on the surplus produce is determined by the Lt. Governor on the recommendations of the Settlement Officer. The orders of the Lt. Governor are final in this respect.

Revenue Administration

Before independence, Delhi was a District Headquarter. The executive staff comprised one Deputy Commissioner and one Asstt. Commissioner. One of them functioned as a Treasury Officer and the other as a Revenue Assistant. For collection of land revenue *Zaildari* system was introduced in 1880. Originally the *Zaildars* received one per cent of land revenue of their *zails* as *inam*. In the constitution of *zails*, caste factor was also kept in view.

About three *Lambardars* were appointed in each village and each *Lambardar* was allotted a sub-division of village called *thok*, *thula* or *patti*. Roughly Rs. 1000 of revenue of land and canal was fixed for one *Lambardar*. In 1908-9. a *Lambardar* received about Rs. 25 as *pachotra* (headman's dues).

Presently the authority for all judicial and non-judicial matters connected with the land revenue and settlement is vested in Lt. Governor. The whole district is placed in the charge of a Deputy Commissioner, who is also ex-officio Secretary (Revenue) of the Delhi Administration. In revenue matters he is assisted by an Additional District Magistrate (Revenue), who in turn is assisted by the following officers:

1. Revenue Assistant
2. District Land Reform Officer
3. District Collection Officer
4. Settlement Officer

The Revenue Assistant supervises, the work of the *Tehsildars*, *Naib Tehsildars*, *Kanungos* and *Patwaris* in the maintenance of land records, grant of *bhumidari* rights and implementation of Delhi Land Holding (Ceiling) Act, 1960. The two *Tehsildars* at Delhi

and Mehrauli function under his control. Earlier there was one *tehsil* at Delhi and a sub-*tehsil* at Mehrauli but on December, 1, 1967 Mehrauli was made a full-fledged *tehsil* under a separate *Tehsildar*. Each *tehsil* is sub-divided into field *Kanungo* circles. Delhi *tehsil* comprises Delhi, Narela and Najafgarh circles whereas Mehrauli *tehsil* comprises Mehrauli and Palam circles. Each field *Kanungo* circle is headed by a *Naib-Tehsildar* under the over all control and supervision of the *Tehsildar*.

At the District level the *Sadar Kanungo* working under the Revenue Assistant, looks after the land record work of his *tehsil*. To deal with the legislative measures relating to land reforms etc. the sub-Divisional Magistrate is also conferred with the powers of the Revenue Assistant.

The District Land Reform Officer is responsible for the implementation of the Delhi Land Reform Act, 1954 and the Punjab Money Lenders Act as extended to Delhi.

The District Collection Officer supervises the collection of land revenue. The Settlement Officer is responsible for the implementation of consolidation programme in accordance with the provisions of East Punjab Holdings (Consolidation and Prevention of Fragmentation) Act, 1948.

The Tehsil Staff

Patwari

The *Patwari* is the king-pin of revenue administration. Each *Patwari* has his headquarters in the *halqa* assigned to him. He is required to attend the *tehsil* on such dates in each month as may be fixed by *Tehsildar*. On these days, the *Patwari* reports in writing to the office *Kanungo*:

(a) all cases requiring correction of entries.

(b) all cases of death or disappearance of pensioners.

(d) all admissions, transfers and leases referred to in Section 22 of Delhi Land Revenue Act, 1954, which involve the change in the mutation register.

(d) all deaths of *bhumidars* or *asamis* which necessitate change in *khatauni*.

He also obtains orders from the office *Kanungo* to make changes in the *khatauni*.

He always brings his *khatauni* to the tehsil.

Reports on Calamities

Patwari acts as a social worker at the time of a natural calamity such as hail, flood, fire epidemic etc. He submits a report to office *Kanungo* and makes necessary relief arrangements.

Preparation of Demand and Collection Jamabandi

The *Patwari* prepares in duplicate the demand and collection *jamabandi* for each village within his *halqa*, separately in L.R. Form 19, showing the land revenue payable by each *bhumidar*. This is done every year before the 10th of September in respect of villages not subjected to the alluvial action of the river and the Najafgarh *Jheel* and as soon as possible after Ist of December in respect of villages subjected to alluvial action.

The *Patwari* maintains following papers as per Delhi Land Revenue Rules, 1962

1.	Map (shajra)	Rule	49
2.	Khasra	,,	50
3.	List of boundary and survey marks	,,	116
4.	Khatauni	,,	83
5.	List of changes in khasra	,,	66
6.	Errata list to *khatauni*	,,	107
7.	List of corrections caused by clerical errors in *khatauni*	,,	103
8.	Diary	,,	110
9.	Order book	,,	115
00.	Statement of *kharif* crops sown	,,	116
11.	Supplementary *kharif* crops statement	,,	116
12.	Statement of *rabi* crops sown	,,	116
13.	Supplementary *rabi* crops statement	,,	116
14.	Statement of *zaid* crops sown	,,	116
15.	Supplementary *zaid* statement	,,	116
16.	Area statement	,,	116
17.	Statement of holding, land revenue and rentals		118

Inspection Tours

In order to keep the map and field book upto date, the *Patwari* makes three field-to-field inspections of every village in his *halqa* every year. The inspection tours begin on Ist September, Ist February, and Ist April. The first and second tours are completed on 15th October and 15th March respectively, whereas the third is completed within a fortnight.

Preparation of Khasra

(i) The *khasra* is prepared by the *Patwari* in form B-5

(ii) There is a separate *khasra* for each village. For areas where Delhi Land Reforms Act, 1954, does not apply a separate *khasra* has to be prepared according to Punjab Land Reforms Manual.

(iii) If the recorded tenure holder or sub-tenure holder has permitted any person to share in the cultivation of his holding or any part thereof as a partner or

sojhi, the name of the sharer is shown in the remarks column of the *khasra* together with the word *sojhi*.

(iv) If a *bhumidar* or *asami* uses a holding for a purpose other than agriculture, horticulture or animal husbandary, the use to which the land is put is recorded in the remarks column.

(v) If the crop fails and the land is not sown in the same season, the crop entered shall be that which was sown and failed. In case the land is resown in the same season, the latest crop sown is entered.

(vi) Following system of marks is used to distinguish areas irrigated from different sources:

Canals-a line above the figures.

Tube-wells—a double circle round the figures.

Other Wells—a single circle round the figures.

Tanks, *jheels*, ponds etc with capacity of irrigating 100 acres or more, a double lined square round the figures.

Other tanks, *jheels* ponds a single lined square round the figures.

Girdawar Kanungo : The functions of *Girdawar Kanungo* are following:

(i) General supervision of *Patwaris*.

(ii) Supervision of village maps.

(iii) Check on *Patwari's* records.

(iv) Detection of deterioration in agriculture, if any.

(v) Local enquiries.

(vi) Attestation of documents under the rules issued by Lt. Governor.

Girdawar Kanungo forwards a monthly return to Sadar *Kanungo* in a prescribed form (Form G-2) showing the progress of his work. He ensures that every *Patwari* in his circle resides in his *halqa*. He also ensures that *Patwaris* comply with the rules regarding alluvion, diluvion, *taccavi* works etc. He verifies at least 7 per cent of the *khasra* numbers at each harvest.

Sadar Kanungo

Sadar Kanungo is an advisory officer to the Deputy Commissioner. His main duties are as follows:

(a) Examination of diaries and monthly progress return of *Girdawar Kanungo* and Office *Kanungo* and inspection of *Office Kanungo* at the *tehsil*.

(b) Compilation of statistics and returns.

(c) Maintenance of registers.

(d) Miscellaneous.

He is responsible for the compilation of following returns received from tehsil and their prompt transfer to departments concerned in accordance with the following table:

	Name	Date of submission	Remarks
1.	*Kharif* crop statement	Ist December	—
2.	Advance return of *kharif* crops	–do–	To be submitted only when *kharif* crop statement has been delayed.
3.	*Rabi* crop statement	15th April	—
4.	Advance return of *rabi* crops	–do–	To be submitted only when *rabi* crop statement has been delayed
5.	*Zaid* crop statement	Ist June	——
6.	Area statement	Ist July	——
7.	Statement of holdings, Land revenue and rentals	31st August	——
8.	Indent of land record forms	Ist February	——
9.	Monthly return of cattle diseases	Last working day of each month	To be submitted to vaterinary Department
10.	Annual return of survey	Ist July	——
11.	Abstract inspection report	Within 15 days from the end of each quarter	——

Tehsildar and Naib-Tehsildar

The *Tehsildar* is an executive officer who works under the direction of the Deputy Commissioner, and the Revenue Assistant in all matters connected with the land revenue and general administration of the *tehsil*. His important functions are:

1. To see that land records are maintained correctly.
2. To see that land revenue *jamabandis* and *jamabandis* of *asami's* of *Gaon Sabhas* are prepared correctly and in time
3. To see that whenever required by law, timely action in filing suits initiating proceedings, on behalf of a *Gaon Sabha or* Deputy Commissioner or Government, is taken by him or the person concerned.
4. To keep all Government money and property placed in his charge in safe custody.
5. To report all cases of alluvium and diluvium and matters pertaining to agricultural growth, land fertility and escheats.

Naib-Tehsildar is also allotted some executive work without prejudice to the overall control of the *tehsildar*.

Record of Rights

For every village a register is maintained as a record of rights of all persons cultivating or otherwise occupying land in the village. It also contains particulars of the tenure and sub-tenure holders as well as the land revenue payable by them. This register is revised annually by the Deputy Commissioner, with a view to enter in it all transactions affecting the rights or interests in the land. No transaction in land can be carried out without the orders of the competent authority such as Deputy Commissioner, Revenue Assistant or *Tehsildar.*

Any person becoming a *bhumidar* or *asami* on obtaining possession of any land by succession or by transfer (other than a lease permitted under the Delhi Land Reforms Act, 1954) reports the matter to the *Tehsildar*. After proper inquiry the *Patwari* of the *halqa* is asked to record the succession or transfer in the Annual Register. A person failing to report such transfers within three months is liable to a fine not exceeding five times the fee-payable by him.

All disputes about the entries in the Annual Register regarding lands held and occupied for a public purpose or a work of public utility are referred to the Deputy Commissioner, who directs the concerned party to obtain a declaration of the Lt. Governor under sub-section (4) of section I of the Delhi Land Reforms Act, 1954. All other disputes regarding entries in the Annual Register are decided by the *Tehsildar* on the basis of possession. No order as to the possession passed under section 27 of Delhi Land Reforms Act, 1954 shall debar any person from establishing his right to the land in any civil or revenue court. All entries in the Annual Register are considered true unless proved to the contrary.

Boundary marks

The *bhumidars* are responsible to maintain permanent boundary marks lawfully erected in their fields. The *Gaon Sabhas* are also required to maintain legally erected boundary marks in the villages within their jurisdiction. In case, a *bhumidar* or *Gaon Sabha* fails to erect, repair or renew such boundary marks in the prescribed manner within 30 days, the Deputy Commissioner is empowered to get the job done and recover the charges from the *bhumidar* or the *Gaon Sabha* concerned. The Revenue Assistant is responsible for proper maintenance of boundary and survey marks.

Agricultural Farms

After the partition of the country many agricultural farms were established in Delhi, particularly in the rural areas of south Delhi. There are about 250 mechanised agricultural farms owned by retired army and civilian officials, industrialists and

refugees. These farms grow flowers, vegetables, fruits and food-grains. A few poultry farms have also been set up.

Land Reforms in Delhi

The Union Territory of Delhi has been carved out of the states of Uttar Pradesh and Punjab. Consequently ever since its inception as a separate administrative unit it has been governed by the agrarian legislation of these two states. The villages lying to the east of Yamuna were governed by the Agra Tenancy Act, 1901, while the villages to the west of Yamuna were governed by the Punjab Tenancy Act, 1887, as modified in 1939. The land revenue was also governed by the Uttar Pradesh Land Revenue Act, 1901 and the Punjab Land Revenue Act, 1887. With a view to unifying the land laws of Delhi, a Land Reforms Committee was appointed in early fifties and on its re-commendations, a comprehensive legislation called the Delhi Land Reforms Act, 1954 was enacted on July 20, 1954. The Act provided for the modification of the *zamidari* system so as to create a unified body of peasant proprietors. It also provided for the creation of co-operative farms and *Gaon Panchayats* for the administration of village land and revenues.

The Act repealed the following Acts:

(i) The Punjab Tenancy Act, 1887 as modified by Punjab Act No. 9 of 1939.

(ii) The Agra Tenancy Act, 1901.

(iii) The Punjab Tenants (Security of Tenure) Act, 1950.

(iv) The Punjab Land Revenue Act, 1887, in so far as its provision, are inconsistent with this Act.

(v) The Uttar Pradesh Land Revenue Act, 1901 in so far as its provisions are inconsistent with this Act, and

(vi) So much of any other law or of any rule having the force of law as much as it is inconsistent with the provisions of this Act.

This Act covers the whole territory of Delhi excepting the following:

(a) Areas which are included in a Municipality or a Notified Area under the provisions of the Punjab Municipal Act, 1911 or a Cantonment under the provisions of the Cantonment Act, 1924.

(b) Areas included in any estate owned by the Central Government or any local authority.

(c) Areas held and occupied for a public purpose or a work of public utility and declared as such by the Chief Commissioner or acquired under the Land Acquisition Act, 1894 or any other enactment other than this Act relating to acquisition of land for a public purpose.

(d) Land which is evacuee property as defined by the Evacuee Property Act, 1950 except in the following cases;

(i) Evacuee lands held by tenants under lease or agreement entered into before August, 15, 1947

(ii) and Evacuee's share in lands of common utility which would vest in the *Gaon Sabha.*

Land Reforms Act, 1954 was amended in 1959, 1965 and 1966. The main amendment was however, carried, in the year 1965. Under Section 42,46 and 81 of the Act, the *Gaon Sabhas* are responsible for managing and controlling common lands and also for securing the ejectment of persons who acquired lands in contravention of Chapter III of the Act or diverted agricultural lands for non-agricultural purposes. A number of *Gaon Sabhas,* however, failed to discharge these functions effectively. The said amendment invested the revenue authorities with powers to supplement the efforts of *Gaon Sabhas* in removing encroachments.

After the commencement of Delhi Municipal Corporation Act, 1957, the Delhi Panchayat Raj Act, 1954 ceased to apply to urbanised villages. However, the *Gaon Sabhas* being corporate bodies continued to exist. A provision was, therefore, made for winding up the *Gaon Sabhas* Sabhas in urbanised areas. The Delhi Land Reforms (Amendment) Act, 1966 was enacted to protect the interest of those persons who had been enjoying *bhumidari* rights under Delhi Land Reforms Act, 1954.

Pattern of Holdings

There are very few large holdings in the Union Territory of Delhi. The Agriculture Census of 1970 revealed that the majority of the holdings fell in the category of 0.5 hectares and below. There were as many as 8,678 holdings in this category. Holdings ranging from 5 to 10 hectares and 10 to 20 hectares numbered 4,640, covering 14.5% of the total agricultural holdings. There were only 71 holdings of 30 hectares on above and these covered a total area of 3,982 hectares. The Census also revealed that 52,848 hectares of land was distributed in 16,109 holdings which were cultivated by the farmers jointly.

Under Delhi Land Reforms Act, 1954 no *bhumidar* has the right to transfer by sale or gift or otherwise any land to any person other than an institution established for a charitable purpose or a body notified by the Lt. Governor where as a result of the transfer:

(a) such person shall become entitled to land which together with land, if any, held by him personally or together with the members of his family will in the aggregate. exceed thirty standard acres, or

(b) the transferer shall be left with an uneconomic holding of less than eight standard acres in the Union Territory of Delhi.

Land Revenue and Liability of Bhumidars

The aggregate of land revenue payable by all the *bhumidars* in respect of land situated in any village is deemed to be the land revenue assessed on that village. The land revenue assessed on any village is the first charge on all lands of village and on rents, profits or produce thereof. No attachment of rent, profit or produce by any court can be given effect to until the current land revenue or arrears have been paid. The payment of land revenue is to be made in instalments and on dates prescribed by the Deputy Commissioner-15th January for *khariff* and 15th June for *rabi*. Payments can be made in the office of the *Tehsildar* or remitted through money order. However, where the *Amins* have been appointed for the collection of land revenue, the payment is to be made to them against proper receipts.

All land held by *bhumidars* is subject to the payment of land revenue except such land as may be exempted wholly or partly from such liability, under the provisions of section 122 of Delhi Land Reforms Act, 1954 or under any other law. No length of occupation nor any grant made before the commencement of Delhi Land Reforms Act, 1954 shall release such land from the liability of land revenue.

All *bhumidars* of a village are jointly and severally responsible to the government for the payment of assessed land revenue or their lands. All persons succeeding whether by devolution or otherwise, to the interests of such *bhumidars* will be responsible for all arrears of land revenue due at the time of their succession.

Suspension or Remission of Land Revenue

The Lt. Governor is empowered to remit or suspend for any period of time the the whole or part of the land revenue on any holding and may grant corresponding relief in the payment of rent to an *asami* during an agricultural calamity. The remission or suspension order cannot be questioned in a civil or revenue court. The relief in the revenue of a holding is provided on the following scale·

Loss measured in annas per rupee of normal produce	Relief of land revenue per rupee
(a) Amounting to 8 annas but less than 10 annas	6 Annas
(b) Amounting to 10 annas but less than 12 annas	10 Annas
(c) Amounting to 12 annas and above	1 Rupee

The Deputy Commissioner is empowered to suspend revenue and rent for a period of three months but suspension for a longer period requires the sanction of the Lt. Governor.

Procedure for Recovery of Land Revenue and other Dues

The Land Reforms Act, 1954 provides for the recovery of arrears of land revenue by any one or more of the following methods:

(a) by serving a writ of demand or a citation to appear on any defaulter.

(b) by arrest and detention of his person
(c) by attachment of the holding in respect of which the arrear is due
(d) by attachment and sale of his movable property including produce
(e) by sale of the holding in respect of which the arrear is due
(f) by attachment and sale of other immovable property of the defaulter

A writ of demand known as *dastak*, requires the addressee to pay the arrears together with *talbana* (a service fee).

Taccavi and Miscellaneous Dues

Miscellaneous dues include water charges and *taccavi* dues which are realisable as arrears of land revenue. *taccavi* loans are of two kinds:

(i) Loans advanced under the Agriculturist Loans Act, 1984 and recoverable as arrears of land revenue under section 5 of the Act.

(ii) Loans advanced under the Land Improvement Loans Act, 1883 and recoverable as arrears of land revenue under section 7 of the Act.

Procedure for accounting of demand, and maintenance of various registers is given in Delhi Territory Loan Rules, 1967 framed under the above Acts.

Under section 3 of the Revenue Recovery Act, 1890 a Collector is empowered to issue a certificte for the recovery of a demand by enforcement of process in districts other than those in which they become payable. Under section 5 of the Act, he may proceed to recover the sum as arrear of Land Revenue.

Sadar Wasil Baqui Navis

In connection with the recoveries, *Wasil Baqui Navis* maintains the following records:

(a) *Khatauni* for land revenue.
(b) *Khatauni* for canal dues.
(c) Records prescribed for *taccavi* in Delhi Territory Loans Rules, 1967.
(d) Lists of demand of other dues, if any.
(e) Day book of daily collections.
(f) Stock register of receipt books received and issued.

Wasil Baqi Navis intimates the *khatauni* No. of each village both for land revenue and canal dues to each *Amin* at the commencement of each harvest.

On return of *dakhla* from the bank the *Wasil Baqi Navis* verifies whether the amount entered in day books has been duly credited to the government account or not. In case of any discrepancy he reports the matter to *Tehsildar* for enquiry. He maintains all the prescribed registers for all kinds of dues recoverable as arrears of land revenue.

Machinery for Collection of Land Revenue

The Lt. Governor is empowered to employ any agency for the collection of land revenue. He may charge any *Gaon Sabha* with the duty of realising land revenue and other dues in areas under its jurisdiction. In such case every *bhumidar* has to pay land revenue to the concerned *Gaon Panchayat* (section 133 of the Delhi Land Reform Act). The *Gaon Panchayat* is paid remuneration at the prescribed rate for the collection work. The Act abolished the posts of *Lamberdars, zaildars* including *Safedposh* whose place has now been taken by the *Amins*.

Implementation of Delhi Land Holdings (Ceilings) Act, 1960

The Delhi Land Holdings (Ceiling) Act, 1960 was enacted with a view to enforce the ceiling on the ownership of agricultural land It came into force on 16th April, 1962. The Act provided for the imposition of ceiling at 30 standard acres on existing holdings and further acquisitions of *bhumidars*. The standard acre means a measure of area convertible into ordinary acres of any class of land according to the prescribed scale with reference to quantity of the yield and quality of the soil. Allowance was, however, made for the size of the family subject to a maximum of 60 standard acres.

An amendment to the Act came into effect on 8.12.1975 Under the amended Act, the land ceiling limit has to be fixed after considering the nature of soil, means of irrigation and capability of producing the number of crops in a year. The limit varies as under:

(a) (i) 7.25 hectares, in the case of land which is assured of irrigation from a private source and is capable of yielding at least two crops in a year, or

(ii) 5.8 hectares in the case of land which is assured of irrigation from a government source of irrigation and is capable of yielding at least two crops in a year; or

(b) (i) 10.9 hectares in the case of land which is assured of irrigation from a private source of irrigation and is capable of yielding at least one crop in a year, or

(ii) 8.7 hectares, in the case of land which is assured of irrigation from a government source of irrigation and is capable of yielding at least one crop in a year, or

(c) 21.8 hectares in the case of any other land, including an orchard.

Under the Act of 1960 the family in relation to a person means the wife or husband, as the case may be, and the dependent children and grand-children of such a person. In the amended Act of 1976 the family has been defined as a person, the wife or husband as the case may be and the minor sons and unmarried minor daughters of such a person. However, under the amended Act if a family comprises more than 5 members then every additional member has a right to hold 1/5 of the holding in relation thereto subject to a maximum of two units. A major son of a *bhumidar* is entitled to hold a separate

unit of land provided that the land, if any, held by such major son or if he has a family by any other member of his family, shall be taken into account in determining the ceiling limit.

Under the provisions of the amended act, the Lt. Governor can make a declaration to the effect that the provisions of this Act are not applicable to the area hold and occupied for the purpose of *goshala* or for the purpose of breeding or feeding of horses on 24.1.1971. Such a declaration shall be made in respect of an area held or occupied for the purpose of *goshala* unless the *goshala* has been established for a charitable purpose without any motive for profit and registered as a society under the Societies Registration Act, 1850 and the entire income from such area is utilised for the purpose of the *goshala*. Under the Act of 1960, Lt. Governor could exempt land used as an orchard before the 10th day of February, 1959 or used as a farm in which structural improvements had been made and which in the opinion of the Lt. Governor was so efficiently managed that its breakup was likely to result in the fall of production provided that where such a person held the compact block of land together with any other land, he shall be permitted to elect to retain either the compact block of land notwithstanding that it exceeds the ceiling limits or the other land not exceeding the ceiling limit. However, in the amended Act of 1976 where the maximum limit for land used as orchard has been fixed at 21.8 hectares the exemption with regard to mechanised farm, which was allowed in the Act of 1960, has been done away with.

While in the Act of 1960 transfers between 10th February 1959 and the date of commencement of Act were held to be void, in the amended Act of 1976 the transfers between appointed date i.e. 24.1.1971 and the commencement date of the amended Act i.e. 8.12.1975 could be considered if the transferer proved that the sales were bonafide.

In the event of acquiring any excess land of a *bhumidar* the government is obliged to pay him compensation calculated as under:

Class of Land	Rate per hectare in rupee		
	For the first 3 hectares	for the next 3 hectares	for the remaining areas
(a) Land under assured irrigation and capable of yielding at least two crops in a year.	5000	4400	4000
(b) Land under assured irrigation and capable of yeilding at least one crop in a year	2500	2200	2000
(c) Any other land (including an orchard)	1250	1100	1000

The amount of compensation is realised by the government from the allottees for payment to the *bhumidar* whose land has been declared surplus. The priorities for allotment of excess land in the villages are fixed as under:

(a) Landless agricultural labourers particularly those belonging to scheduled castes and scheduled tribes residing in the same village.

(b) Landless agricultural labourers particularly those belonging to scheduled caste and scheduled tribes residing in the contiguous villages, and

(c) Landless agricultural labourers particularly those belonging to scheduled castes or scheduled tribes residing in any village in the Union Territory of Delhi.

When the land of any *bhumidar* is declared surplus he is given the choice to specify the land he desires to surrender. After this, a notification is published in the official Gazette under section 6 (3) of the Act. The *bhumidar* can file objection, if any before the Additional Collector within 30 days of such publication. Such objections can be entertained even after the expiry of 30 days if the Additional Collector vested with the powers of Deputy Commissioner is satisfied with the reasons for delay in filing objections. The Additional Collector after considering the objections can approve or modify the list published earlier. The said list is then notified and wide publicity is given to it. From the date of notification the excess land stands vested in the Government free from all encumbrances.

Consolidation of Holdings

In Delhi the task of consolidation of holdings was first undertaken in 1929 under the Cooperative Societies Act, 1912. It was continued till 1949 under the administrative supervision of the Cooperative Department. The Act did not, however, provide for compulsory consolidation of holdings and consequently between the years 1929 and 1949 only 49,795 acres of land owned by 8,086 cultivators of 55 villages was consolidated. In the year 1949 the consolidation work was transferred from the Cooperative Department to the Revenue Department. At the same time, the East Punjab Consolidation of Holdings Act, 1936 was also extended to Delhi. But under this Act, the consolidation proceedings could be undertaken only when two third of the land owners, possessing 3/4th of cultivated area in the village, agreed to consolidation. This necessary consent of the land owners in faction-ridden villages was, however, very hard to obtain. To overcome this difficulty the East Punjab Holdings (Consolidation & Prevention of Fragmentation) Act, 1948 was extended to the Union Territory of Delhi in December, 1951.

This Act provided for compulsory consolidation of agricultural holdings and prevention of fragmentation of agricultural holdings. Under this Act, the Government on its own accord or on request could declare its intention to make the scheme for consolidation of holdings in a revenue estate or in a group of revenue estates and publish the

same by issuing a notification. After this notification, Settlement and Consolidation officers are appointed. A draft scheme of consolidation is prepared by the Consolidation Officer in consultation with the village Advisory Committee. Verification of preliminary records is the most important part of the exercise. The entries in the last *khatauni* i.e. the record of rights are announced in a village gathering and omission and errors corrected by the field staff. A list of all the *khasra* numbers in the revenue estate is prepared and assessed valuation in respect of each *khasra* number is recorded. The valuation is done after a field to field survey and objections, if any, are settled by the Consolidation Officer. The village Advisory Committee is also associated with the valuation. The valuation of trees, walls and constructions is also made so that in case these are allotted to other persons the compensation could be given to the owner. The *khatauni istemal* i.e. the record of rights at the time of consolidation is prepared from the last *khatauni*. It is updated by incorporating changes, if any.

A consolidation pass-book enlisting the entire holdings of a *bhumidar* with their valuation is given to each *bhumidar* duly signed by the *Patwari*, *Kanungo* and Assistant Consolidation Officer. A village map is also prepared on the basis of the inspection of fields, tubewells and other constructions. The *killas* in a rectangular shape are carved out on this map as well as on the spot. From this map, a field book is prepared showing the ordinary and standard area of each and every *killa* (*killa* comprises 4 *bighas* and 16 *biswas*). This map also depicts path-ways, water-channels and extended residential areas.

While drafting this scheme certain basic principles are followed. It is ensured that the land of equal value is given to each *bhumidar* in lieu of his pre-consolidation holdings. Effort is made to allot land to each *bhumidar* at a place where major portion of his pre-consolidation holdings existed. The person holding land in two contiguous villages is allotted land on boundary line and the persons belonging to the same family are given adjacent plots as far as possible.

The draft scheme thus prepared is published and the objections invited. After settling the objections, the Consolidation Officer submits the scheme to the Settlement Officer (Consolidation) for approval. The Consolidation Officer then undertakes the task of re-partition of holdings according to the scheme. A register known as *gahtwar* is also prepared. The details of re-partition are announced by the Assistant Consolidation Officer in the village and objections if any are invited. Persons unsatisfied with the consolidation of their land may file an appeal before the Settlement Officer and Additional Collector. The State Government can call for the examination of the records of any case, pending or disposed of, and may pass revised orders in such cases.

Implementation

Out of 357 villages of Delhi, land holdings of 55 villages were consolidated by the Co-operative Department in 1948. When this work was taken over by the Re-

venue Department, 76 villages were adjudged unfit for cultivation. This left only 226 villages for consolidation. Twenty villages were consolidated before the commencement of the First Five Year Plan. The consolidation work was started in the remaining 206 villages during the Plan but it was held in abeyance in 1954 with a view to enable the tenants to acquire *bhumidari* rights under the Delhi Land Reforms Act.

Before the commencement of the Delhi Land Reforms Act, 1954, the consolidation proceedings had been finalised in 135 villages. Thus the consolidation work was to be undertaken in 71 villages only. In 1959-60, consolidation operations could not be resumed due to uncertainty about the villages which would fall within urban limits. Under the Master Plan, another 46 villages were declared unfit for consolidation. By 1964-65 the consolidation work had been completed in 211 villages. This left 24 villages for consolidation. In 1963, the work of consolidation was resumed in four villages at the request of tenure holders but it was soon abandoned due to the opposition of land owners.

Of the remaining 20 villages six villages were taken up for consolidation in 1965. In 1970, 60 villages were taken up for consolidation. These included 14 villages which were never consolidated and 46 villages which had been consolidated under the Co-operative Societies Act. Out of these 60 villages, the work in one village was suspended due to land acquisition. Three villages which were declared unfit for consolidation earlier were also taken up for consolidation during this period. Thus consolidation operations were undertaken in 62 villages. Out of these villages 29 have been consigned so far.

Of the remaining 33 villages, Delhi High Court has granted stav in respect of 1 village. By the end of December, 1979, records had been consigned in respect of 5 more villages. Records were under preparation in respect of 16 villages in 1979, for the remaining 11 villages, objections, were pending.

Land Acquisition in Delhi

After the partition of the country, a large number of refugees came to Delhi. A great need was felt to acquire land for their rehabilitation. A special Land Acquisition Collector was appointed in the office of the Delhi Iprovement Trust to acquire land for the Trust's needs. Two of its major schemes were Shadipur Improvement Scheme and Delhi Ajmeri Gate Improvement Scheme. The land for the aforesaid schemes was acquired under the Land Acquisition Act, 1948.

The Ministry of Rehabilitation also acquired land through the Land Acquisition Collector under the Displaced Persons (Land Acquisition) Act, 1948. The land acquired under the Land Acquisition Act, 1954 was utilised to build Defence Colony, Malaviya Nagar, Lajpat Nagar, Kingsway Camp, Moti Nagar, Rajinder Nagar, Kirti Nagar,

Ramesh Nagar, Tilak Nagar etc. Thus before 1959, the land acquisition in Delhi was done on ad-hoc basis by the Delhi Improvement Trust and Land Acquisition Collector.

Subsequently in view of rapid urbanisation, the Delhi Master Plan was formulated. This necessitated large scale acquisition of land. The scheme of Large Scale Acquisition Development and Disposal of Land in Delhi was approved by the Government of India in 1961 for implementation on a self generating basis with a limited revolving fund of Rs. 5 crore. The implementation of this scheme was entrusted to Delhi Development Authority and a Land Acquisition Branch headed by Additional District Magistrate (Land Acquisition) was created in 1960. All notifications for the acquisition of land are issued by the Land & Building Department of Delhi Administration.

During 1968-69 land was notified on a large scale. This was done with a view to avoid the invalidation of the notifications issued earlier. In 1968 and 1969, 225 and 286 cases respectively were notified. In most of these cases, land was acquired for the purpose of flood control. From 1967 to 1979 notifications were issued in as many as 1,154 cases involving nearly an area of 1.18 lakhs *bighas*. But the land has been actually acquired in 539 cases only involving an area of 48,000 *bighas*. Compensation of 1.13 crores was paid between 1972-1980. An enhancement of 2.48 crores was allowed by the court, thereby raising the amount of compensation to 3.61 crores.

Out of the aforesaid notified land, an area of 39,455 acres was acquired by December, 1977 for the planned development of Delhi. Land measuring 6,227 acres had also been acquired under various non-planned schemes from April, 1961 to December, 1977. An amount of Rs. 46 crores had been paid as compensation on this count upto January, 1978. Another Rs. 30 crores were paid as a result of enhancement of compensation by various courts.

In the beginning, the land acquisition unit comprised one Additional District Magistrate, two Land Acquisition Collectors, field staff and ministerial staff. In 1961-62 two additional posts of Land Acquisition Collectors were created. Further, on the amendment of the Land Acquisition, Act, 1967, four more posts of the Land Acquisition Collectors were sanctioned. However, only two of these posts were filled up.

In 1967, the land acquisition plan suffered a set-back because of an agitation against the acquisition policy of the Government. Delayed acquisition due to paucity of funds, and unauthorised encroachments have, also created certain complications in the acquisition work.

Mines & Quarries

The Union Territory of Delhi is not rich in mineral resources. Among major minerals (as defined in the Mines & Minerals Regulation & Development Act, 1957)

only China clay and fire clay are being exploited commercially. Minor minerals such as stones, *bajri*, and badarpur sand are available in plenty. China clay and fire clay are found in hilly tract of the revenue estates of Mahipalpur, Masoodpur, Kusumpur, Rangpuri, Mehrauli and Ayanagar. China clay is used as raw material for pottery industry whereas fire clay is used for manufacturing fire bricks etc.

Major minerals in Delhi can be excavated only after obtaining a mining lease/prospecting licence from the government under the provisions of the Mines & Minerals (Regulation and Development) Act, 1957 and the rules framed thereunder i.e. the Minerals Concession Rules, 1960. The Lt. Governor of Delhi is empowered to grant such lease. The maximum tenure of mining lease for china-clay is 20 years, whereas the term of prospecting licence for exploring it is two years. The owner of land for which lease is granted, is entitled to compensation for damages caused to his land from the leasee either by mutual settlement or by Government intervention. While granting the mining lease a person holding a prospecting licence is preferred over others. If two or more persons apply for prospecting licence or mining lease in respect of the same land, the applicant who applied earlier is given preference. In case the applications are received from two or more applicants on the same day, the government may favour one with better experience and financial resources. The Administration can grant prospecting licence/mining lease even to an applicant who has applied late, with the approval of the Central Government.

Any person who undertakes adjust mining operations without obtaining prospecting licence/mining lease or in contravention of the terms and conditions of prospecting/mining leasee can be punished with imprisonment up to one year or with a fine up to Rs. 5,000 or both. If any person unlawfully raises any mineral from any land, the State Government can recover from him mineral so raised or its price if disposed of.

Delhi Minor Mineral Rules, 1969 regulate the grant of permit for quarrying minor minerals viz. sand, *bajri*, *badarpur* stone etc. Prior to the enforcement of these rules Delhi Minor Mineral Rules, 1938 were in operation. These rules were framed under the Punjab Land Revenue Act whereas the existing rules have been framed under the Mines and Minerals (Regulation and Development) Act, 1957. The permits for quarrying of minor minerals are generally issued on monthly basis. Major stone quarrying sites are located in the revenue states of Tajpur, Naib Sarai, Molarband, Maidangarhi Johanpur, Tughlaqabad, Dera Mandi, Pulpehlad, Bhatti, Delhi, Rajokri and Rangpuri.

The land from which stone is generally quarried belongs to *Gaon Sabha*. A permit is granted only after the applicant has obtained no objection from the land owner after paying compensation for the land. The Deputy Commissioner, empowered to

enforce the provisions of the Act, can order relaxation of rules in special cases by recording reasons in writing. Royalty is charged in advance from the permit holders. The arrears of royalty, penalty etc. are recoverable as arrears of land revenue. The government departments are, however, exempted from the payment of royalty and permit fee.

Bajri and *Badarpur* sand is available in the revenue estates of Bhati, Asola, Kusumpur and Mahipalpur whereas Jamuna sand is quarried mainly from the revenue estate of Okhla, Madanpur Khadar and Jasola.

Earlier quarrying permits were issued to individual contractors on monthly basis. But in July, 1976 a policy decision was taken by the Administration to entrust the entire mining activity in the Union Territory to DSIDC, a public sector undertaking.

Implementation of Delhi Lands (Restrictions on Transfer) Act, 1972

The basic idea behind the Delhi Lands (Restrictions on Transfer) Act, 1972 was to check unauthorised sale of plots by the colonisers in Delhi. If the agricultural land in Delhi is to be used for a purpose other than agriculture, proceedings for acquisition of such land through *Gaon Sabha* can be initiated under the Delhi Land Reforms Act, 1954. But in many Delhi areas only the Punjab Land Revenue Act is applicable and under this Act, there is no provision for action against violations. It was felt that the Delhi Lands (Restrictions on Transfer) Act, 1972 could be helpful here. But in practice, permission under the Act is required only in such cases where land has been notified under section 4 or 6 of the Land Acquisition Act. Further permission under the Act is needed only if it is a case of lease, sale, gift, mortgage etc. The general practice is to transfer the land clandestinely on the basis of execution of a power of Attorney. Thus the Delhi Lands (Restrictions on Transfer) Act, 1972 does not provide a remedy against this.

Additional District Magistrate (Revenue) is the competent authority under this Act to dispose of application within the stipulated period of 30 days of the receipt of the application. The Land & Building Department is however, administratively responsible and the Secretary (Land & Building) is the appellate Authority in such cases Proposals are afoot to make necessary amendments in the Act to bring the execution of power of attorney also within the provision of the Act.

In the year 1979, as many as 525 applications for grant of permission under the Act were received by the competent authority. Permission was granted only in 331 cases.

Implementation of Haryana Relief Agricultural Indebtedness Act 1976

This act has been recently extended to the Union Territory with the object to provide relief to agricultural labourers, rural artisans and marginal and small farmers

from indebtedness. With the enforcement of this Act every debt upto 2,400 together with interest thereon, against the above mentioned categories of people, shall be deemed to be wholly discharged. A relief on debt exceeding Rs. 2,400 is also proposed to be provided to these categories. seven Sub Divisional Magistrates have been empowered under the Act to discharge different functions vide a notification dated 27th may, 1977.

The Act also prohibits money lending business without registration with the Collector. The money lender who ignores this provision is liable on conviction to a fine not exceeding Rs. 1000 for the first offence and Rs. 2,000 for every subsequent offence.

CHAPTER V

INDUSTRY

Introduction

Delhi, as the capital city of India through the ages always attracted master craftsmen from various parts of the country and even abroad. During the Mughal period, it turned into a prosperous centre of handicrafts excelling in the arts of zari, zardosi, brocade, embroidery and ivory. The decline of the Mughals, deprived the industry of the state patronage and the handicrafts languished. Subsequently, the trade policies of East India Company discouraged the growth of handicrafts not only in Delhi but also in other parts of the country.

The modern phase of industrial growth began in Delhi when three engineering works and iron foundaries were set up during 1872–79. Two cotton textile mills were set up in 1883 and 1889. The establishment of a modern flour mill in 1891 and a biscuit factory in 1898 also contributed to the industrial development in nineteenth century. The shifting of capital from Calcutta to Delhi in 1911 led to more rapid industrialisation. One ice factory was established in 1912. The cotton textile industry secured a sound foothold by the year 1919. Large flour mills came into existance in 1917 and 1918.

The pace of industrialisation caught up after 1920. Within a few years, hosiery, lace and broid and pottery works were set up and iron foundaries and engineering works established. In 1929, power dirven machinery was introduced in the lametta industry. A modern mill was established in Delhi-Shahdara in 1932. An acid factory started functioning in 1934. The other industries established in Delhi during this period were chalk, crayons, coloured pencils, paints, glassware, vegetable ghee, cement tiles, squashes etc.

The Second World War (1939–45) created a great demand for manufactured goods in the Defence Services. This gave impetus to local production, leading to an unprecedented industrial growth. Consequently, the number of registered factories increased from 111 to 277 in 1945. Interestingly, the scrap material which became surplus with the big industries encouraged the growth of some small units at cottage industries level. These units produced tin containers, blue tacks, horse-shoe nails, tent rings, shoe eye-lids, buttons, tin toys, iron buckets etc. The end of the war posed a grave problem before these industries. Many could not adjust to the changed situation and perished. Others took initiative in exploring new avenues and started manufacturing wire netting, metal gauges, paper products, rubber goods, playing cards, sela-hats, electric heaters, cycle accessories etc.

Industrial development in Delhi received a fresh impetus after independence. The displaced persons from Pakistan set up small scale industries in a bid to rehabilitate themselves. Consequently, in March 1951, the number of registered factories in Delhi stood at 431 against 227 in 1945. The number of industrial establishments not registered under the Indian Factories Act also showed a phenomenal increase. The first comprehensive industrial survey conducted during 1950–51 revealed that 8,160 industrial units employing 69,266 persons with a capital investment of 18 crores were functioning in Delhi. Since then, industry has made considerable progress not only in terms of number, capital investment and employment but also in diversification and sophistication. The entrepreneurs and official agencies both have contributed in the accelerated development of industries in Delhi.

In the successive five year plans of Delhi, emphasis has been laid on the development of small scale industries. During the second plan period, Okhla Industrial Estate was established in a rural setting with the same intent. In Third Plan period, Badli Industrial Estate was established to give impetus to rural industrialisation. Shahdara and Najafgarh Road Industrial Estates have served a similar purpose. According to 1965 census, 19,038 industrial units were functioning in rural Delhi with a capital investment of Rs. 81 crores. These units provided employment to 1,59,731 persons. The highest number of units were engaged in metal products transport equipment and foot wear.

Notable improvement has taken place in the quality and variety of goods manufactured by small scale industrial units. These units now manufacture sophisticated electronic goods like T.V., V.C.R., V.C.P., tape-recorders and transformers, automobile parts, precision instruments, machine tools, room-coolers, air-conditioners, electric gadgets, microscope and hospital equipment. The units producing traditional items like pottery, brass-ware, ivory goods and handloom products are also thriving. Delhi has a tremendous scope for products of day to day use such as rubber and plastic, paints and varnishes, cosmetics, electrical equipment and gadgets, glass products, readymade garments, leather shoes, surgical equipment, processed food items, automobile parts etc.

Emergence of Delhi as nerve centre of small scale industries has led to the development of peripheral towns adjoinfng Delhi such as Sonepat, Bahadurgarh, Ballabhgarh, Faridabad and Ghaziabad. In fact this is nothing but a spill over the industrial growth of Delhi.

Industrial and Rural Urban Interaction

Delhi being a metropolitan city, it is very difficult to draw a precise dividing line between urban and rural industries. The industries which were originally set up in rural areas with a view to rural development have now come to be a part of urban

complex. The Badli Rural Industrial Estate is a good example of this changed situation. Similarly, the industrial areas like Wazirpur, Najafgarh Road, Nangloi, GT Karnal Road, Mayapuri, Naraina and Shahazada Bagh (Inderlok) which were earlier rural have now become completely urban. The industrial development in the Union Territory has a rural bias from the very beginning in so far as the industries were set up away from the city. But in truly rural areas, only cottage industries or foot-loose industries useful for local needs have been set up.

In many cases, the shiftfng of hazardous industries to areas away from the city led to rural industrial development. This industrial dispersal enveloped rural areas and absorbed them into the city. The distinction between the rural and urban industry was in the process erased. A case study of industrial areas like Nangloi, Najafgarh Road, Narela, Naraina, Patparganj and Jhilmil Tahirpur which were initially developed in rural surroundings go far to prove this. It is remarkable that the spread of industry into rural areas gave them an urban character, particularly in the context of rapid population growth.

The last three plans envisaged the industrial development of Delhi with a view to benefit rural areas. The following plan schemes were put into operation:--

Name of the Scheme	Location
Tool Room and Training Centre	Wazirpur
Testing and Development Centre	Okhla
Weight and Measures Laboratory	Wazirpur
Weaver Colony	Bharatnagar
Flatted Factories for Leather Goods	Wazirpur
Functional Industrial Estate of Domestic (goods) Appliances	Patparganj
Construction of Industrial Sheds in Rural Areas	Najafgarh, Nangloi Alipur and Shahdara Blocks
Okhla Industrial Estate Extension	Okhla
Badli Industrial Estate	Badli
Work Centres, D.D.A.	Resettlement colonies in rural areas.
Development of Mines	Bhati-Badarpur
Functional Industrial Estate for Electronics	Okhla
Flatted Factories for Group Industries	Okhla
Development of Narela Industrial Complex	Okhla
Construction of Sheds by DSIDC	in all Blocks

Block Industrial Centres	in all Blocks
Handloom Development	Nand Nagri
Khadi and Village Industries Project	Rural areas
TRYSEM (Training of Rural Youth for Self-Employment)	Rural areas
Development of Additional Lands and Functional Industrial Estates	Gharoli
Work-cum-Residence for Handloom Weavers	Nand Nagri
Community Work Centres by DSIDC	28 Selected rural sites

It is thus clear that the planned development is rural biased. Naraina and Mayapuri industrial complexes are examples of industrialisation on scientific lines in rural areas. This implies rural-urban interaction. Owing to special characteristics of metropolitan city, actually there is no rural area in the Union Territory. It is a case where industries on urban pattern are set up in rural areas. In view of this it is difficult to differentiate rural and urban industries in Delhi.

DRDA/SFDA help the rural industries to retain their original character. The Directorate of Industries, Delhi Administration, has set up separate rural zones of Narela and Najafgarh with this end in view. Integrated Rural Development Programme (IRDP) also aims at accelerated rural industrial development. But none of these measures have succeeded in their intent. Lack of investible resources in rural areas, lies at the root of this failure.

To illustrate the point the Badli Rural Industrial Estate, was meant to be a haven for rural industries. But it ultimately turned out to be an urban industrial complex located in an area which was rural to begin with. It did not generate any new entrepreneurship in rural areas. Industrial development on modern lines further rendered the rural artisans unemployed. They have now no option save to work in newly developed industries. Sophistication has affected the character of rural industries and new technology has changed the pattern of rural industrialisation. Rapid urbanisation has overtaken rural development and therefore, in the true sense there is hardly any rural industrial area in Delhi.

Distinctive Features of Delhi's Industrial Growth

After independence, Delhi has developed into a big industrial centre. This industrial growth has influenced the agriculture and allied sectors. Substantial part of agricultural land has been taken over by the Government for industrial development. The industries have, thus, sprawled far into the rural periphery of the metropolis. Industries which now appear to be located in the heart of the city were actually established on the outskirts of the old city limits. Najafgarh Road industrial area was purely rural at the time of its development but now it is well within the urban limits.

The fast development of industries has created problems of environmental pollution and congestion. Foul atmosphere and filthy surroundings pose a real threat to the health of the people in genral and industrial workers in particular. To illustrate, the G.T. Road (Karnal) industrial area, which has lately been developed in accordance with the Master Plan, has started creating problems for the residents of adjoining colonies.

To solve the problem of hazardous industries in the city, the Directorate of Industries launched the scheme of shifting them to conforming areas in early sixties. A large number of industries were allotted plots by the DDA in Mayapuri, Naraina, Jhilmil, Tahirpur and Okhla under this programme. But inadequate development of infrastructure in the new industrial areas discouraged entrepreneours to shift there and they preferred to operate in their old premises in spite of actute shortage of space. The new sites whosoever occupied them, were generally put to other uses. Shifting under Master Plan has also remained confined to already urbanised areas.

Industrial Growth in Post-Independence Era

After independence, the growth and diversification of industries has progressed at rapid pace on account of refugee enterpreneurship and planning. The refugee mercantile community in the process of rehabilitating itself played a viral part in expanding Delhi's industrial base. They utilised the available resources to the fullest extent. The expansion of industries in Delhi accelerated with the commencement of First Five Year Plan. This expansion of industries covered urban as well as rural areas. The following table is revealing in this repect:

Table-1

Number of Registered Factories (Rural and Urban)

Year	No. of Registered Factories	No. of Workers Employed
1	2	3
1951	431	40,780
1953	625	35,690
1958	950	51,535
1959	990	54,485
1960	1,044	57,793
1961	1,096	60,317
1962	1,182	62,992
1963	1,250	66,572
1964	1,293	71,089
1965	1,359	74,284
1966	1,403	76,261
1967	1,422	76,178
1968	1,504	76,641

1	2	3
1969	1,552	80,237
1970	1,628	82,849
1971	1,764	87,762
1981	3,649	1,53,000
1982	3,917	1,58,000
1983	4,168	1,66,000
1984	4,440	1,78,500

There has been eight fold increase in the number of registered factories during the first three decades of planning. The number of workers also increased three fold during this period. New industrial areas of Najafgarh Road, GT Karnal Road, Naraina-Mayapuri, and Kirti Nagar were developed. It is, however, remarkable that the registered factories form only one part of the new industrial base of the Union Territory. The unregistered industrial units comprising small scale and cottage in-industries established in the underdeveloped rural areas form the other part. These industries always claimed a sizable share in Delhi's industrial growth. In 1951, small and cottage industries employed 30,000 persons against 40,000 in registered factories. In 1965, as against 74,000 workers in registered factories, small units employed 86,000 workers. The corresponding figures for 1969 were 1,13,000 as against 80,000 and for 1984, 3,60,000 as against 1,53,000.

Size of Employment-Rural Delhi

In 1971 the percentage of industrial units in rural Delhi was 4.67 of the total. The percentage of employment in the case of registered factories was however, 5.12 of the total. The rural share in respect of unregistered units was smaller as is evident from the following table :

Table-2

Registered and Unregistered Industrial Units

	Item	Registered Factories	Unregistered Factories
1.	No. of Units	111	899
2.	Percentage to total no. of units	4.67	3.07
3.	No. of persons employed	5,360	1,919
4.	Percentage to total no. of persons employed	5.12	2.07

(Census of India, 1971)

In 1971 registered factories falling under major group of non-metallic mineral products, employed the maximum number of persons in rural areas. In urban areas, the registered factories under cotton textiles group employed the maximum numbei of persons. During the year 697 household industries employed 1,208 persons in rural Delhi whereas in urban Delhi 5, 981 household industries employed 15,996 persons. The following table gives the distribution of household industries, their number and employment potential:

Table-3

Household Industries and their Employment Potential

Type	No.	Percentage	Employment (no)	Per-centage
Manufacturing & Repairs	697	100.00	1208	100.00
(i) Manufacture of food products	104	14.92	166	13.74
(ii) Beverages and tobaco products	1	0.14	2	0.17
(iii) Cotton textiles	88	12.63	239	19.78
(iv) Jute hemp and mesta textiles	2	0.29	4	0.33

Employment	Registered		Unregistered		Household	
No.	Persons	Per cent	Persons	Per cent	Persons	Per cent
	5360	100	1919	100	1208	100
1.	......	......	473	24.91	360	29.80
2–4	......	......	808	42.11	716	59.27
5–9	......	......	541	28.19	132	10.93
10–19	672	12.54	92	4.79	......	......
20-49	773	14.42	.....	......	.....	......
50–99	680	12.69	.....	......	......	......
100–299	2235	41.70	......	......	......	......
300–499	400	7.46	....	......	.....	......
500	600	11.76	.....	......	......	......

(Census of India, 1971)

Largest number of unregistered units i.e. 136 belong to the major group and their employment size of the bulk of these is 2–4 persons. Under this group, there was no unit employing more than 9 persons. Under major group, manufacture of cotton textiles, out of 50 units, 36 were being managed by one person only. There were only 2 units where number of persons employed per unit was 10 to 19.

In 1971, out of the total registered factories in the Union Territory of Delhi, 54 were Government/Quasi Government, 2287 privately owned and 36 managed by Coopera-tives. In rural Delhi, 1 registered factory was Government/Quasi Government, 104

privately owned and 6 managed by Cooperatives. Of the unregistered workshops, 3 were Government/Quasi Government, 882 private and 14 co-operatives. All 697 household industries were private as shown in the table:

Table-4

Type	Manufacturing, Processing and Servicing Establishments		
	Registered Factories	Unregistered Workshops	Household Industries
(a) Government/Quasi Government	1	3	—
(b) Private	104	882	697
(c) Co-operatives	6	14	—

(Census of India, 1971)

Types of Fuel or Power used

Till 1971, most of the industries in rural Delhi were run without any kind of power. Being small in size they probably found manual labour cheap and convenient and, therefore, avoided the use of power. Industries engaged in the manufacture of transport equipment were, however, run by electricity. Other industries manufacturing food products, paper and paper products, printing, publishing and allied works, rubber, machine tools and parts, electrical machinery etc. also used electricity. The number of industries run by liquid fuel was almost negligible. The percentage of industries running manually was 38 per cent. All manually run industries were either 1 person or 2-4 person concerns. The following table gives the details of registered and unregistered workshops using different kinds of fuel/power:

Table-5

Kinds of Fuel used by Various Industries

Kinds of fuel/power	Registered Factories	Household Industries
All fuel/power	618	478
Electricity	372	138
Liquid fuel	25	9
Coal wood and bagasse	212	330
Others	9	1
Manual	382	522

(Census of India, 1971)

Pattern of Employment in Rural Enterprises

As many as 2,77,411 enterprises forming 97.8 per cent of the total are identified in the non-agricultural sector. In all 13,89,472 persons (12,58,880 males and 1,30,592 females) constituting 98.8 per cent of the total working force are employed in them. 41 per cent of the enterprises employed at least one hired worker regularly. These establishments are employing 10,16,212 hired workers (9,08,427 males and 1,07,785 females). For details see table below :

Table-6

Pattern of Employment in Rural Enterprises

Item	Urban	Rural	Total
Persons usually working daily in the non-agricultural enterprises			
Total	13,23,857	65,615	13,89,472
Male	12,00,647	58,233	12,58,880
Female	1,23,410	7,382	1,30,592
Persons with hired employment usually working daily in the non-agriculturing sector			
Total	9,80,980	35,232	10,16,212
Male	8,77,748	30,679	9,08,427
Female	1,03,232	4,553	1,07,785
Persons usually working daily in agricultural enterprises			
Total	8,949	7,263	16,218
hired	2,984	2,099	5,083

(Economic Census, 1980 Provisional Results)

On an average an enterprise employs 4.4 persons in M.C.D. (Urban) area. As against this, the corresponding figures are 23.5 for N.D.M.C., 3.8 for Delhi Cantt. and 2.7 for rural area.

Table-7

Pattern of Employment in different Zones

Local Body	Persons usually employed No.	Per cent	Persons usually employed per enterprises
1. M.C.D. (Urban)	1084258	77.1	4.4
2. N.D.M.C.	244033	17.4	13.5
3. Delhi Cantt.	4515	0.3	3.8
4. Rural Area	72878	5.2	2.7
Total Territory	14,05684	100.0	5.0

(Economic Census–1980 Provisional Results)

The number of persons working in rural enterprises is the highest in Kanjhawala Block followed by Shahdara-Alipur and Najafgarh Blocks. The figures for Najafgarh zone and Narela zone are 9.095 persons (230 agriculture and 8,865 other than agriculture) and 4,307 persons (36 agriculture and 4,271 other than agriculture) respectively.

Table-8

Employment Pattern—Blockwise

CD Blocks	Persons usually woking and percentage All Enterprises	Agricultural terprises	Non-agricultural enterprises
Alipur	16,329	1011	15,318
	22.4	13.9	23.3
Mehrauli	7,987	1455	6532
	11.0	20.0	15.0
Najafgarh	12,602	2034	10,568
	17.3	28.2	16.1
Kanjhawala	18,510	699	17,811
	45.4	9.6	27.1
Shahdara	17,450	2064	15,386
	23.9	28.5	23.5
Total	72,878	7,263	65,615

(Census of India, 1980)

Non-agricultural enterprises amounting to 58.5% of the total are run without any hired labour. In the urban areas, about 56.7 per cent of the non-agricultural enterprises are of own account type i.e. having no hired worker. The average of hired persons employed per non-agricultural establishment is 9.

Characteristics of Enterprises in Rural Delhi

In 1980, there were 2,83,722 enterprises in Delhi. Out of these 27,277 were established in rural areas. Of the 2,77,411 non-agricultural enterprises, 24,241 were located in rural areas. 3,036 enterprises in rural areas and 3,275 in urban areas were engaged in livestock production, agricultural services, hunting, trapping and game propagation, forestry, logging and fishing. Enterprises related to agricultural production and plantation are not included in this. Out of the toal 1,17,375 enterprises were functioning without premises. The number of such enterprises in urban Delhi

was 38,068. 21,272 rural enterprises functioned without power, owing to shortage of power or the nature of the enterprise.

Table-9

Salient Features of Enterprises in Rural Delhi

Item		Urban	Rural	Total
I.	Enterprises	2,56,445	27,277	2,83,722
(a)	Non-agricultural	2,53,170	24,241	2,77,411
(b)	Agricultural	3,275	3,036	6,311
II.	Enterprises with atleast one hired worker	1,10,677	6,698	1,17,375
(a)	Non-agricultural	1,09,682	5,550	1,15,232
(b)	Agricultural	995	1,148	2,143
III.	Enterprises with selected principal characteristics			
(a)	With premises	2,18,377	19,845	2,38,322
(b)	Without premises	38,068	7,432	45,500
(c)	Perennial	2,49,710	26,225	2,75,935
(d)	Private	2,40,027	25,914	2,65,951
(e)	Owned by Scheduled Castes	22,727	5,188	27,915
(f)	Without power	1,86,372	21,272	2,07,644
IV.	Persons (including unpaid workers) usually working daily in the non-agricultural enterprises.	13,23,857	65,615	13,89,472
(a)	Males	12,00,647	58,233	12,58,880
(b)	Females	1,23,210	7,382	1,30,592
V.	Persons with hired employment usually working daily in non-agricultural enterprises	9,80,980	35,232	10,16,212
(a)	Males	3,77,748	30,679	9,08,427
(b)	Females	1,03,232	4,553	1,07,785
VI.	Persons usually working daily in agricultural enterprises			
(a)	Total (including unpaid workers)	8,949	7,263	16,212
(b)	Persons with hired employment	2,984	2,099	5,083

(Economic Census 1980 Provisional Results)

Pattern of Enterprises in Rural Areas

In 1980, Delhi Administration conducted an economic census to ascertain the structure, activities and employment potential of all enterprises. It revealed that 86 per cent of the entrepreneurial activity was centred in MCD (Urban) area, 3.7 per cent in NDMC area, 0.4 per cent in Delhi Cantt. area and 9.6 per cent in rural area. The rural share in enterprises was thus much smaller than urban even when Narela and Najafgarh were bracketted with the former. Blockwise position of enterprises in rural Delhi is given in the following table:

Table-10

Rural Enterprises—Blockwise

Block	Total No.	%	Agricultural No.	%	Non-agricultural No.	%
Alipur	5,869	21.5	460	15.4	5,400	22.3
Mehrauli	2,557	9.4	544	17.9	2,013	8.3
Najafgarh	4,678	17.2	861	28.4	3,817	15.7
Kanjhawala	7,259	26.6	315	10.4	6,944	28.7
Shahdara	6,914	25.3	847	27.9	6,097	25.0
Total	27,277	100.0	3,036	100.00	24,241	100.0

(Economic Census, 1980 Provisional Results)

Besides these Blocks there are Narela and Najafgarh rural zones. Narela Zone, which includes Narela Township, Satni Vihar, Shakti Vihar and Harsh Vihar has 1,278 enterprises (14 agricultural and 1,264 non-agricultural). Najafgarh Zone, comprising Najafgarh town, Hakikat pur and Masudabad villages and Mangolpuri, has as many as 4,567 enterprises (128 agricultural and 4,439 non-agricultural).

Of the total agricultural enterprises 48.1 per cent are located in rural areas and 51.9 percent in urban areas. 53.6 per cent of the rural agricultural enterprises have hired workers and 45.3 per cent are own account enterprises. In respect of urban areas, the percentage of enterprises with hired workers is 91.3 and own account enterprises in rural area is only 8.7.

Table-11

Classification of Establishments According to Economic Activity

Activity	No. of Units	Employment
Mining and quarrying	279	3,681
Manufacturing and repair	1,145	23,486
Electric, gas and water	36	719
Construction	11	240
Wholesale and retail trade	275	984
Restaurants and hotels	104	357
Transport	48	1,535
Storage and warehousing	2	19
Communications	66	228
Financing services	68	494
Common, social and personal services	695	8,370
Total	2,729	40,107

(Economic Census, 1980 Provisional Results)

Occupational Distribution in Rural Delhi

The process of urbanisation has greatly influenced the occupation pattern in Delhi. The services sector now engages a much larger number of workers than the agricultural sector. The women comprise 7 per cent of the total work force and bulk of them are employed in agriculture. The Block wise position of population engaged in three leading sectors of economic activity is given in the following table:

Table-12

Percentage of Population Engaged in Different Sector Block-wise

Block	Agricultura. Sector	Industrial Sector	Service Sector
Shahdara	26.84	41.05	32.11
Mehrauli	23.21	36.59	40.20
Najafgarh	30.05	15.52	45.43
Kanjhawala	36.45	20.78	42.77
Alipur	47.02	18.72	34.26
Total	35.90	23.96	40.14

Characteristics of Rural Traditional Industries

The industrial scene in rural Delhi has some peculiar characteristics. It is a blending of sophisticated modern and archaic traditional industries. The villages of Delhi are more developed in socio-economic terms in comparison to other villages and this is clearly perceptible in their pattern of industries and occupation. Rapid urbanisation has relegated agriculture to a secondary position. The proximity of the city enables villagers to have full time occupation in government and private offices and industries.

Strictly speaking the rural industries have remained confined to traditional arts and crafts. Further, they have not yet adopted modern methods of processing or production. Their tools are also underdeveloped. There is a general tendency among people to migrate to urban areas for better earnings. Allurement of better wages in urban areas is a great disincentive to the younger generation to follow their traditional callings. However, there are still certain traditional industries run by traditional artisans in rural Delhi. Some of these industries have enough scope for expansion if proper facilities are provided to them. Blacksmithy, carpentry, pottery, leather works spinning and weaving are some of the popular rural industries of Delhi.

Leather

The leather industry produces foot-wear to meet the local demand. A cobbler earns Rs. 5 to 6 by manufacturing the *jutties* and Rs. 3 to 4 by repair work per day.

The pattern of production is still medieval as only traditional tools are used by them. Semi-tanned leather, locally procured or bought from adjoining areas, is used for making *jutties*. Owing to urbanisation, more and more people are now turning to western style shoes and this is a grave threat to the rural leather industry.

In 1979–80, the Carcass Utilisation Centre, New Delhi run by the KVIC (Departmental Units) produced goods worth Rs. 1.98 lakhs and its sales amounted to Rs. 2.15 lakhs. The Departmental foot-wear unit attached to the Centre produced goods worth Rs. 0.75 lakhs during the year.

Pottery

The pottery industry produces clay utencils, pans, pots, roof tiles etc. The production techniques employed by the industry are outmoded and there is no sufficient work for the workers. The artisans live in clusters/pockets. In Indrapuri alone 800 potters are concentrated at one place. The KVIC (Khadi and Village Industries Commission) has been able to help 20 to 30 potters by providing them institutional finance through State Bank of India.

The industry is in a bad shape. Since the return from the industry is poor, the artisans prefer other occupations. Setting up of technical extension centres may probably help the industry.

Carpentry

Carpentry in rural Delhi is mostly a family occupation. The artisans are self-employed. However, the *jajmani* system is still prevalent in some rural areas. Under this system, the artisans carry out repair services of agricultural and household implements for farmers and get food grains etc. in return after harvesting season. They also prepare wooden items like windows and doors, to cater for the local demand. The industry needs a real improvement in quality and diversification.

Spinning and Weaving

The industry is in poor shape and depends on old and infirm for its existence. The artisans use indigenous looms, charkha and rotating frames and produce coarse cloth, like ghas, khadi and jarka. The weaving is done at predetermined rates. The raw material is procured from the local dealers. The level of productivity is low and so are the earnings. The *Janta Gramodyog Samiti*, Nangloi (Kanjhawala) Block is running six spindle MMC centres. The Samiti was allotted one MMC unit of 50 Charkhas. Now this unit is functioning as a TRYSEM training centre. One more registered institution viz. *Khadi Gramodyog Samiti*, Narela is also working for the improvement of the industry.

Ghani Oil

The number of *telies* is gradually decreasing because of the introduction of oil expellers. At present there are about 1,000 traditional *telies* in Delhi. The power

ghani has proved a boon to them. If these artisans could be provided with improved facilities, such as power and oil seeds at reasonable rates, this industry can continue to flourish.

Impediments in the Growth of Traditional Industries

(1) The artisans are still using primitive tools. The result is low productivity, inferior quality and poor market prospects. There is tough competition from organised sector. Inadequate financial resources of the artisans is also detrimental to modernisation.

(2) There is lack of skilled artisans in these industries. The lure of attractive wages in urban areas does not encourage talent here.

(3) Widely dispersed nature of arts and crafts discourages the growth of cooperatives.

(4) Inadequate supply of raw material and poor storage facilities also create problems. The fluctuations in the price of raw materials have further aggravated the situation. Because of poor financial position the artisans cannot buy raw material in bulk for storing.

(5) There is no proper institutional support, official or voluntary, at the Block level, to rural industries.

(6) The *jajmani* system and the middleman do not allow the growth of proper marketing organisation.

(7) The banking sector has also not been much helpful to the artisans. Owing to the rigid terms and conditions attached to the loans, the artisans still turn to the middleman for credit.

Prospective Areas of Growth

Pottery, leather works, crude paper, soap, bee-keeping, processing of cereals and pulses, ghani oil, etc. are some areas where rural industry can do well. Pots and bans have a good demand and the use of improved hand tools may add to the efficiency of the industry. There is good scope for setting up hand-made paper units because of the availability of adequate raw material such as paper-rags, tailor cuttings etc. There is a good scope for setting up laundry soap units in rural areas. Though the technical knowhow and institutional finances are available in this field, the non-availability of raw material at controlled rate remains a major constraint. In Alipur and Shahdara Blocks, some laundry soap units are already functioning. Blacksmithy is another potential area of growth. According to the Directorate of Economic Research, there is scope for setting up 10 different types of blacksmithy and carpentry units in Alipur, Kanjhawala, Najafgarh and Mehrauli Blocks. Leather industry can also grow if the artisans are assured sufficient quantity of raw material at reasonable rates. The Ghani oil industry has also good prospects of development if raw material at concessional rate is assured. These are some of the areas where rural industry can make good progress.

The artisans engaged in rural industries are socially and economically backward. The following measures at Government level may be helpful in the growth of rural industry;

(a) Extension of relaxation in *Lal Dora*

(b) Easy marketing facilities

(c) Streamlining of power connections

(d) Allotment of land by Delhi Development Authority at concessional rates

(e) Exemption of sales tax and octorai both for raw materials and finished goods

(f) Exemption from licence fees

(g) Preferential treatment in purchase

(h) Relaxation of the limit of 10 kilometers and cluster approach in the case of village industries unit

Industrial Complexes in Semi Rural and Rural Delhi

The scheme of developing semi rural and rural industrial complexes was implemented with a two fold purpose. Firstly the heavy concentration of industries in urban area was hazardous to public health and therefore, non-conforming industries had to be removed to some safer areas away from the city. Secondly industrial complexes in rural areas were meant to encourage local entrepreneurship and to provide employment to rural population, thereby leading to rural development. Some important industrial complexes with rural bias are described below:

Industrial complexes—Naraina and Mayapuri (Semi-Rural)

Among the Semi-rural industrial complexes of Delhi, Naraina and Mayapuri deserve special mention. Earlier in seventies this area was surrounded by villages. Now with the process of urbanisation, it is gradually loosing its rural character. Today there are more than 1000 units in this new industrial hub of Delhi.

The Naraina Industrial Area, spread over 280 acres, was developed along with the Okhla and Lawrence Road Industrial Area by the DDA under the Master Plan. The objective of developing these industrial areas was to encourage entrepreneurs to shift their units from non-conforming areas in the city to better surroundings with extended facilities for the promotion and expansion of industry. Naraina Phase I is dominated by electronic and ready made garment industries and 50 functional electronic units are located there. These units produce sophisticated electronic items like television sets, video cassette recorders, tape recorders and electronic components. There are also 50 printing units, specialising in off-set printing. A large bulk of essential oils and industrial perfumes manufactured here is exported to USSR, France, United Kingdom and USA. USSR alone buys at least 12 tons of oil every year. The demand for rose, jasmine, tuberose and musk oils is unending.

The Mayapuri-Naraina is also famous for garment industries. 60 per cent of the country's garment export trade conducted from Delhi is centred here. The medico-surgical industry here made a rapid growth during the last decade. Operation theater lights, hydraulic operation tables, microscopes, surgical instruments, diagnostic eye-trial sets etc. are produced here.

Some wall clock units, established a few years ago now meet 60 per cent needs of the nation. One of the industrial units produces dental cream which is exported to Soviet Union. Another unit manufactures fire-fighting equipment for ocean-going ships.

Rural Industrial Complexes

The industries have been set up in almost all the villages of Delhi. However, the major rural industrial complexes are as under :-

1. Badli industrial complex
2. Narela industrial complex
3. Nangloi industrial complex
4. Samaypur, Libaspur, Shahbad, Daultpur, Pahladpur industrial complex.
5. Shalimar village industrial area
6. Karawal Nagar industrial area
7. Patparganj industrial area
8. Rani Bagh industrial area
9. Shakurpur Village industrial belt.
10. Shastri Nagar industrial area.

Badli Industrial Complex

There are 283 industrial plots in this complex. In 1981–82, this industrial estate with 31 units employing 500 persons and an investment of Rs. 171.21 lakhs, was producing goods worth Rs. 341.45 lakhs

Nangloi Industrial Complex

There are 118 industrial units employing 1,052 persons. In 1981–82, the total investment of these industries was Rs. 350.08 lakhs and production was worth Rs. 932.27 lakhs.

Shalimar Village Industrial Area

In this complex about 800 units are functioning.

Patpar Ganj

There are about 250 units in this area.

Karawal Nagar

It is situated on Loni Road across Wazirabad Bridge. There are 100 units in this complex.

Rani Bagh

There are about 200 units in this area.

Shakurpur

150 Industrial Units are functioning in Shakurpur Village industrial belt.

Shastri Nagar

Shastri Nagar Industrial Belt embraces 200 industrial units.

Samaypur, Libaspur and Siraspur Industrial Complex

Adjacent to Badli industrial estate, there is a huge industrial complex covering the villages of Samaypur, Libaspur and Siraspur. The development of this complex dates back to early sixties, when some small scale units were set up in this area. There are more than 500 small scale/cottage industries in this area employing 15,000 workers. The industries produce rubber goods, handlooms, engineering goods, agricultural implements, fertilisers, paints, plastic goods, paper products, chemicals etc.

Problems of Rural Industrial Complexes

The urban areas of the Union Territory have hardly any room left for industrial expansion and therefore, the prospective entrepreneur has no option but to shift to rural area. But setting up a small scale unit in rural Delhi poses many problems as follows:

1. **Restriction on Employment of Manpower**

According to existing rules to get an industrial unit registered as a small scale industry and to avail of the benefits thereof, the number of employees should be restricted to nine. To encourage industrial activity in *Lal dora* area, the Government has raised the limit of capital investment from Rs. 20 lakhs to Rs. 35 lakhs but the permitted number of employees remains the same.

2. **Restriction of Industrial Power Load**

According to the Government decision of 1959, the village industries can be set up with maximum electricity load of 20 HP. But now with the production processes having become totally machanised, the 20 HP limit is just impractical. There is a great demand for raising this limit to 100 HP. In fact manufacturers have already started using the higher power load in utter disregard of the limit imposed by the Government.

3. **Land for Industries**

The population pattern of Delhi has completely changed owing to fast urbanisation. As a result of this many rural industries may now be called as located in non-conforming areas. The Government may have to shift them to alternate sites.

4. **Provision of Civic Amenities**

The rural indnstrial areas suffer from the lack of proper civic amenities such as roads, lanes, street lights, drains, sewerage etc. These are unauthorised industrial areas and therefore civic authorities are reluctant to provide these facilities to them. But this attitude will have to be changed for proper industrial growth.

Schemes for development of industries in rural areas

For better coordination among various organistaions dealing with the development of rural areas, the Directorate of Industries has formulated a new pattern of MCD Zones. The Department of Industries is implementing following schemes for the development of industries in rural area :

(i) **Block Loan Schemes**

(ii) **Agro-based Industries Schemes**

Under the Khadi and Village Industries Commission Act, there are 25 industries classified as agro-based, livestock-based, forest-based and service oriented. Out of these industries the following 15 have been found suitable for the Union Torritory of Delhi.

1. Khadi (cotton and woolen)
2. Processing of cereals and pulses
3. Ghani oil
4. Match, fireworks and agarbatties
5. Soap
6. Hand made paper
7. Leather
8. Fibre
9. Lime and its products
10. Blacksmith
11. Carpentary

12. Gobar gas
13. Fruit processing and fruit preservation
14. Household aluminium utencils
15. Poly—vastra

The Delhi Administration constituted a statutory Delhi Khadi and Village Industries Board on Ist May, 1983 by extending the Himachal Pradesh Khadi and Village Industries Board Act, 1966 to the Union Territory of Delhi. A sum of Rs. 21.4 lakhs was disbursed on 681 units in 1984-85.

(iii) **Industrial Sheds in Rural Areas**

The scheme aims to provide industrial sheds to rural artisans. The plan is to construct one shed in each community development block. The land for this purpose has already been identified at villages Mitraon and Bakhtawarpur in the Najafgarh and Alipur Blocks respectively. Efforts are being made to acquire land in other Blocks also. These work-sheds are intended to provide facilities training, financial assistance and marketing to rural entrepreneurs.

(iv) **Promotion of Handicrafts**

The Directorate of Industries is encouraging development of handicrafts through various plan schemes:-

Firstly, various training programmes are being conducted under master craftmen. The trainees are paid stipend at the rate of Rs. 100 per month and Master craftman Rs. 750 to 850 per month for the duration of the training.

Secondly, marketing facilities are being provided through the DSIDC which is running a state Emporium at Baba Kharak Singh Marg, Connaught Place, New Delhi and to other recognised institutions.

Thirdly, to encourage the traditional crafts and to maintain their quality, prize competitions are organised every year and State Award (three—Ist Prize Rs. 1,000 each, three—2nd prize Rs. 500 each and three--3rd prize 200 each) given to the outstanding craftmen. All India Handicrafts week is celebrated with this view every year.

Fourthly, provision of work sheds has been made at Rani Jhansi Road, Jhandewalan, New Delhi to encourage craftsmen.

Fifthly, for the promotion and sale of handicrafts, Craft Bazar are being organised at short intervals.

(v) Development of Handoom Industry

The assistance to handloom industry is given by the cooperative societies. At the end of June, 86 there were 458 handloom cooperative societies in Delhi. The 85 handloom societies functioning in rural areas are located as follow :

Locality	No. of Societies
Jheel Khuranja	5
Chowhan Bangar	17
Manoli Road, Shahdara	1
Rani Bagh, Shakurbasti Sawan Park	1
Ashok Vihar	57
Anand Nagar, Tri Nagar	3
Bharat Nagar	12
Ghonda	1
Nand Nagri	28
Adarsh Nagar	1
Loni Road, Shahdara	1
Khirki, Malaviya Nagar	1
Badli	1
Azadpur	1
Jagat Puri	3
Maujpur	6
Puth Kalan	1
Maya Puri	1
Zafrabad, Shahdara	4
Patparganj	1
Sarai Pipal Thala	1
Sadhora Kalan	21

For the promotion of handloom industry in Delhi, the Department of Industries is implementing the following schemes :

(a) Loan-cum-grants for the development of handloom industry in the cooperative sector.

(b) Subsidy for the development of handloom industry.

(c) Design cells for weavers colonies of Bharat Nagar and Nand Nagri.

(d) Provision of residence-cum-work places.

(e) Two new schemes viz. Thrift-cum-Saving Security for Handloom Weavers and Group Insurance Scheme for Handloom Weavers in Cooperative Sector have been stared and more than 500 members of cooperative societies have already joined the Schemes.

At present, the total number of handlooms in Delhi is 9100. These provide employment to 16,600 persons. The main items of manufacture are jazquard furnishings, fabrics, bed sheets, bed covers, napkins and dusters. Total turn over of these items is 19.11 crores per annum. The following cooperative federations are dedicated to the development of handloom industries:

1. Delhi Pradesh Hathkargha Bunker Shekari Sangh Ltd.
2. Delhi State Cooperative Industrial Federation Ltd.
3. Delhi State Weavers Handloom Cooperative Industrial Service Federation Ltd.
4. Delhi State Apex Handloom Cooperative Industrial Supply and Service Federation Ltd.

Financial Assistance for Khadi & Village Industries

The details of financial assistance provided for the development of Khadi & Village industries in 1982-83 are given below:

Table-13

Name of Unit/ Industry	Individual		Institution	
	Grant	Loan	Grant	Loan
1	2	3	4	5
1. **Match making**	—	—	4,200	9,100
2. **Pottery**	1,395	2,455	—	—
3. **Processing of grains and pulses**				47,000
(a) Masala manufacturing	500	3,500	—	—
(b) Papad etc.	250	1,250	—	—

1	2	3	4	5
4. **Leather Industry**				
(a) Shoe making	250	2,250	—	—
(b) Footwear (for entrepreneur)	—	16,700	—	—
(c) Leather article	—	9,500	—	—
(d) 'V' type sale shops	—	—	9,000	23,000
5. **Processing Industry**				
(a) For entrepreneurs	—	34,000	—	—
(b) Household units	100	10,000	—	—
6. Oil Ghani industry (Training Compulsory)	375	21,025	—	—
7. **Fibre Industry, Rope making**				
(a) Hand driven	275	1,275	—	—
(b) Power driven	300	1,300	—	—
8. **Soap industry**				
(a) Washing soap	300	13,000	3,000	85,000
(b) Toilet soap (for Sc. Graduates)	12,800	97,000	—	—
(c) Toilet soap (for units)	—	—	55,000	3,00,000
9. Hand made paper Industry				
(a) Small units	7,500	32,500	—	—
10. **Blacksmithy and Carpentry**				
(a) Power driven units	—	15,000	6,000	1,30,000
(b) Hand driven units	—	3,000	—	—
(c) Blacksmithy	—	3,000	—	—
(d) Carpentrv	—	3,000	—	—
(c) **Entrepreneurial Workshop**				
(i) Blacksmithy	—	47,500	—	—
(ii) Carpentry	—	35,500	—	—
11. **Lime Industry**				
(a) Wheel making (chak)	500	1,500	—	—
(b) Cemented jalies	—	1,000	—	—
(c) Leempo	—	35,000	—	—
(d) Lime making	—	5,000	—	—
12. **Aluminium Utensils**				
(a) Household units	—	12,500	—	—
(b) Small units	—	4,000	—	—

Loans are advanced at the rate of 4 per cent per annum with a moratorium of 2 years.

Like other parts of the country, the Union Territory is also marching ahead with the programme of industrialisation in rural areas. In view of the limited scope of employment in agriculture, this has acquired greater importance. The rural Delhi is well suited for industrialisation is evident from the following:

(i) Proximity to a city which is a big consumption and distribution centre;

(ii) Well connected to the city with pucca roads;

(iii) Availability of cheap powers and

(iv) Sufficient finances for investment. (Delhi villagers got huge compensation for their land and are, therefore, sound financially. Financial institutions are also ready to help).

In view of these facilities the Delhi Administration started an industrial programme for rural Delhi as far back as 1956. The programme was first started as a pilot project at Alipur in Alipur Block. This was followed by the establishment of four more Blocks viz., Shahdara, Mehrauli, Najafgarh and Kanjhawala. The first task in this direction was to educate people on the importance and need for rural industrial development. To this end various schemes were launched. These included (i) intensive publicity for the development of cottage and small scale industries (ii) development of (a) *gur* and *khandsari* units (b) edible oil and soap making (c) hides and skins (d) oil crushing and (e) handloom industries.

Today the villagers of the Union Territory are more conscious of the need for rural industrialisation. Urban entrepreneurs are moving to villages. Availability of cheap labour and non-requirement of municipal licence within the *Lal Dora* area are some of the attractions leading to this flow.

At the inception of this programme, there were only a few industrial units but these increased to 3,300 units by 1965. The number of units in 1968 was 4,470 with a total investment of Rs. 8.73 crores. In 1968 the industry produced goods worth Rs. 22 crores and employed 31,654 persons. By 1969, the number went up to 4,603 units.

No programme of rural industrialisation can, however, succeed unless backed by financial assistance and other facilities. The Directorate of Industries has therefore, been extending many facilities such as long term loans, machinery on hire-purchase basis, cheap raw material, technical guidance etc. to the rural entrepreneurs.

For giving an impetus to rural industry a beginning was made in 1964 with the setting up of a rural industrial estate, comprising seven factory sheds at Badli. Items like agricultural implements, auto cables, insulation tapes, hospital equipment, time

pieces etc. are manufactured in these factories. In 1968–69, these factories produced goods worth Rs. 26.95 lakhs. Under an expansion programme, 36 acres of land has been developed for use by industrial entrepreneurs.

With the objective of decongestion and orderly growth of Union Territory and for strengthening its rural economy, the Master Plan of Delhi has given due thought to rural industrialisation. It envisages organised growth in rural areas under rural district centres and nineteen centrally located villages.

To begin with, the Administration laid emphasis on the training of weavers. A weavers training-cum-production centre was started in 1959–60. During the Third Plan period the scope of training centre was extended to supply cotton to ex-trainees, collect yarn from them and produce cloth under self-sufficiency programme.

The programme of training envisaged distribution of 500 *charkhas* to the spinners, after completion of training, during the Second Plan period. A marketing unit was also set up to sell the *khadi* produced in these centres. The amount spent on the payment of stipend and wages to the weavers under training was as follows:

	Items	1961 66	1966–67	1967–68
1.	No. of weavers who completed the training	57	3	4
2.	Amount paid to the trainees (Rs.)			
(a)	Stipend	7744	1709	871
(b)	Wages	881	307	201

The programme of training in spinning covered rural and semi-urban population and basic school teachers. It was extended to cover the students of basic schools in 1967-68. The duration of training for various categories of people and the number of persons who completed the course in 1966–68 was as follows:

	Category	Duration in months	No. of trainees Third Plan	1966-68
1.	Rural semi-urban population	3–6	271	66
2.	School teachers	1–2	225	182
3.	Students	4–8	—	349

The main objective behind the development of village industries is to make maximum utilisation of local resources and man-power. But on account of peculiar characteristics of Delhi, such as predominance of urban population, limited availability to raw material, high standard of consumption, proximity of rural and urban areas, the village industries as defined by Khadi and Village Industries Commission have a limited scope for development. However, certain industries such as leather, oil, soap, pottery and limestone still offer a better scope for development.

Industrial Policy of Delhi Administration & Rural Industries

The industrial policy of Delhi Administration is heavily tilted towards rural industrialisation. With this end in view a scheme of setting up District Industries Centres in all Blocks of Delhi, on the pattern of the District Industries Centres of the Government of India, was conceived during Sixth Five Year Plan. The scheme could not, however, be implemented because the construction of work-sheds could not be undertaken due to non-availability of land. The scheme was therefore, deferred to Seventh Five Year Plan. It envisaged the following programme:

(a) To identify artisans in each C.D. Block and adjoining resettlement colonies who could be covered under this scheme;

(b) To help them in preparing their schemes, get them registration and extend them help through the Directorate of Industries, Delhi State Industrial Development Corporation (DSIDC), Delhi Financial Corporation (DFC), and Lead Bank, as also from various Central Schemes, like Integrated Rural Development (IRD), Training for Rural Youth for Self Employment (TRYSEM), etc;

(c) to encourage the training of rural artisans and entrepreneurs;

(d) to disseminate information about the industrial and employment opportunities in new industrial estates among the local entrepreneurs;

(e) to encourage cottage industries, within *lal dora* area;

(f) to provide industrial infra structure to rural entrepreneurs and artisans.

The administration envisages assistance and incentive including fiscal support, where necessary to industries located in rural areas, for their proper development. Provision of industrial estates and industrial work-sheds is meant to open employment opportunities for rural population. However, in the village *abadi*, only those traditional industries and modern small scale industries are permitted which are not hazardous. Further no industries are permitted on the agricultural land but in the village *abadi* area, industries using up to 20 HP are allowed. In this connection it is notable that due to cheap land in village *abadi* area, many entrepreneurs have acquired large plots there to set up industries. Consequently, many villages are fast turning into industrial slums. This unfortunate trend needs to be checked.

In cultivating the rural industries, the Administration has the following socio-economic objectives:

1. Dispersal of industries in all areas of the Union Territory including rural areas.
2. Creation of employment opportunities in rural areas,
3. Establishment of new industries outside the urban limits of Delhi, in conforming industrial areas.

4. Development of certain specified industries in the small scale sector. These include:

(a) Electronics
(b) Domestic electrical appliances
(c) Wires and cables
(d) Ready made garments
(e) Hosiery and knitting
(f) Metal based light engineering
(g) Auto parts and cycle parts
(h) Paper products, printing, publishing and allied industries
(i) Plastic and wax-based industries
(j) Sports goods
(k) Leather goods

The following measures have been taken by the Government to encourage these industries in rural areas :

(1) Provision of infrastructural facilities such as flatted factories, built up work space, built up workspace-cum-residential unit, rent subsidy and technical support for needy people.

(2) Marketing support through Government emporias, trade fairs and exhibitions and rebate on sale. Display centres for popularising handloom products at selected places

(3) Protection against powerlooms and mill sector, by discouraging installation of new powerlooms, reservation of certain items for the handloom sector and by ensuring adequate supply of raw material to the industry.

(4) Financial support by advancing loans through cooperative banks, nationalised banks and Delhi Financial Corporation.

(5) Setting up craftmen villages and organising handicraft bazars at suitable places.

Delhi State Industrial Development Corporation

The DSIDC was set up in the year 1971 for the development of small scale industries in the Union Territory. The activities of the Corporation are of two types-developmental and commercial-cum-developmental. As a developmental agency, the Corporation has constructed eight industrial complexes with more than eight hundred industrial units for generating employment of educated unemployed. Twenty nine community work centres have been built in resettlement colonies for providing self-employment to the weaker sections of the society. It has also undertaken a scheme for the development of 612 acres of industrial land at Narela to provide employment to more than 30,000 persons. The Corporation not only advances loans to the entrepre-

neurs but also helps them in seeking finances from banks. Corporations commercial-cum-developmental activities include its functions as a raw material bank. It distributes raw materials such as iron and steel, fatty acids and chemicals worth Rs. 18 crores to small industrial units annually. The Corporation also assists small scale units in exporting their products and importing necessary raw material. It levies nominal service charges from the small scale units.

The Corporation has undertaken a new scheme for providing marketing assistance to small units by opening a chain of retail shops in various parts of Union Territory. Shops have been selected and items for sale indentified. The scheme envisages useful coordination with sister bodies in other states for the growth of rural industries.

The DSIDC has ambitious plans for the growth of industry in the Union Territory of Delhi. These include flatted factories at Rani Jhansi Road, industrial estate for electronics at Okhla, industrial estates of Patparganj, Jhilmil, Tahirpur etc. These plans are, however, rural only in a limited sense and, therefore, have little bearing on our subject. The following schemes of the Administration are, however, basically rural in character.

Delhi State Mineral Development Corporation

The Administration has recently established a separate corporation for the development of mining on scientific basis.

Weavers Work Centres at Nand Nagari

The Directorate of Industries has set up a weaver's colony at Nand Nagri. Six large weaver's work centres have been allotted to weaver's co-operative societies here These centres employ 100 workers and produces goods worth Rs. 20 lakhs per annum

Training in Handicrafts

This scheme aims to train persons in crafts like *minakori*, ivory carving and metal engraving to save the decaying traditional arts. Master craftsmen are employed to teach the fading crafts to the learners.

TRYSEM Scheme

The scheme Training of Rural Youth for Self Employment was started in 1979. The first course under the scheme was organised in August that year. It covered the courses on soap making, oil ghani, paper making, leather craft and pottery at Gandhi Darshan, on chalk making at Cooperative Industrial Society, Zakhira and on tailoring, embroidary and traditional handicrafts at Mehrauli. Of the 81 persons (41 boys and 40 girls) selected from five Blocks in the first batch, 6 learnt soap making, 8 oil ghani, 11 chalk making, 7 paper making, 6 leather craft, 2 pottery, 10 paped badian making and 30 tailoring and embroidery. The training courses lasted from one to three months In the second batch 6 persons joined weaver training.

A district level coordination committee was constituted under the chairmanship of ADM (Development) for planning, implementation and review of these schemes. The Project Director (Integrated Rural Development), Deputy Director (Rural Industries), Head of District Office (State Bank of India) and Asstt. Development Commissioner (Panchayats) are its members. ADM (Development) has been appointed as Nodal Officer for implementing TRYSEM scheme in the Territory.

Integrated Rural Development

Under this scheme the progress of the credit plan for rural of Delhi during 1979-80 is given below:

Table-14

	Item	Amount disbursed (Rs. in lakhs)
1.	Poultry feed	5.01
2.	Edible oil	3.20
3.	Soap	0.50
4.	Clay extraction	0.65
5.	Aluminium utensils	3.10
6.	Stone crushers	7.27
7.	Handloom and village industries	2.42
8.	Other industries	47.61
	Service Sector	
9.	Transport vehicles	146.97
10.	Leather shoes	0.55
11.	Cloth bags	0.18
12.	Repair shoes	1.05
13.	Others	71.38

During 1979-80, financial institutions extended following facilities to rural Delhi:

Table-15

Rs. in lakhs

	Name of Institution	Industrial Sector	Service Sector
1.	State Bank of India	6.35	29.42
2.	Allahabad Bank	7.80	30.08
3.	Syndicate Bank	2.25	14.77
4.	Bank of India	8.60	21.66
5.	Punjab National Bank	8.80	9.68
6.	Central Bank of India	6.98	15.18
7.	Union Bank of India	2.21	7.27
8.	Punjab and Sind Bank	0.37	6.09
9.	New Bank of India	0.14	9.70
10.	Vijaya Bank	7.29	29.43
11.	Dena Bank	1.71	3.29
12.	Traders Bank	0.47	6.30

(Delhi Rural Development Agency (DRDA))

Plans for artisans

The Delhi State Industrial Development Corporation has lauched a Rs. 1 crore scheme to provide work space to poor artisans living in resettlement colonies. It provides for sheds with water and power facilities for over 900 artisans. Each artisan is allotted 100 square feet of working space. DSIDC also assists them in procuring raw material and in marketing their products. The idea is to protect these self-employed poor workers from the clutches of middlemen The industries in these sheds manufacture candles, paper cups, plates etc.

Community Centres

In 1976–77, Rs. 84 lakhs were given as grant-in-aid to the DSIDC for building 28 community centres and for starting training programmes there. By the end of 1979–80, 21 centres had been established and others were in the process of completion. The centres and the number of sheds functioning in each centre are detailed below:

	Name of Centre	Work sheds (as on 31st March 1985)
1.	Kalyanpuri	39
2.	Trilokpuri	14
3.	Nand Nagri-I	28
4.	Nand Nagri-II	39
5.	Seelampur	34
6.	Seemapuri	34
7.	Madangir	25
8.	New Seemapuri	34
9.	Dakshinpuri Ext.	39
10.	Jahangirpuri-II	40
11.	Jahangirpuri-I	38
12.	Raghubir Nagar	31
13.	Sultanpuri-I	40
14.	Sultanpuri-II	40
15.	Shakurpur	40
16.	Mangolpuri-I	39
17.	Mangolpuri-II	42
18.	New Seelampur	38
19.	Mangolpuri-III	42
20.	Kalkaji	39
21.	Hastsal	41
22.	Khayala	39
23.	Madipur	42
24.	Haraina	42
25.	Wazirpur	24
26.	Tigri	37
27.	Khichripur	13
28.	Garhi	20
29.	Jawalapuri	36

A sum of Rs. 30 lakhs each was released to DSIDC in 1978–79 and 1979–80 for constructing additional 100 work centres under the new scheme. Five work centres were completed in 1979–80 and sites for remaining work centres were under search. The estimated cost of each work centre was Rs. 6 lakhs. In all, DSIDC constructed 29 community work centres.

The Master Plan and Rural Development

The Master Plan of Delhi provided for the development of industrial estates in the adjacent rural areas such as Alipur, Kanjhawala, Najafgarh and Narela. These were considered necessary because agricultural activity alone was not expected to provide adequate employment to village people. Further, certain unconforming industries could also be located in such industrial estates. Availability of cheap land, labour, power and good transport facilities gave the concept of rural industrial estates a practical shape. Narela Industrial complex is a fine example of a flourishing rural industrial estate.

The planning and development of Narela industrial complex has been entrusted to DSIDC. It is intended to serve the following objectives:

(a) To provide the entrepreneurs in the small scale sector with developed plots, sheds and other facilities.

(b) To accomodate heavy, medium and light industries including those which are not permitted in urban Delhi.

(c) To establish cluster of ancillary industries catering to the needs of the big industries within the complex. These could serve as supply base to the industries located in adjoining areas as well.

(d) To ensure dispersal of industrial activity from the city.

(e) To disperse population thereby helping in an integrated development of the region.

The complex covering an area of 248 hectares, is being developed in two phases. 173 plots, ½ to 10 acres in size comprise extensive and heavy industrial zone. Light industries and service industries zone includes 628 plots, 400 sq. yds. to 1 acre in size. The aim is to provide opportunities to the first generation entrepreneurs, particularly those coming from weaker sections of society in rural areas.

Light manufacturing and service industries are especially suited to industrial complexes like Narela because the investment in land and infrastructure is low there in comparison to areas located closer to the city. Over 220 types of industries are located in the complex. It is notable that many heavy industries which are consi-

dered hazardous are also allowed in Narela complex. The industrial activity in Narela can be classified under the following heads:

1. Work-cum-industrial sheds, light industries and service industries.
2. Extensive industries,
3. Heavy industries
4. Hazardous industries.

Trade Unions and Labour Welfare

The All India Postal and Railway Mail Service Union formed under Trade Union Act, in 1928 heralded the beginning of trade unionism in Delhi. Subsequently, Delhi Cloth Mills workers Union was registered. Between 1928 and 1935, 11 unions were registered. In 1949, the number of Trade Unions was 40 and by 1980 the number had increased to 1019. The growing consciousness of the working class for their rights seems to explain this rapid rise in the number of trade unions.

Welfare of Industrial Labour

Prior to Second World War labour welfare did not attract the attention of the industrialists or the Government in a sufficient measure. The Delhi Cloth and General Mills Ltd and Birla Cotton Mills were the first to introduce welfare measures like provident fund, gratuity, old age pension and daughter's marriage allowance, medical aid and free education for their employees. Delhi Administration also opened a welfare centre in Sabzi Mandi in 1953. Many welfare centres have since been opened in various colonies of Delhi.

Labour Office

The labour office of Delhi Administration headed by Labour Commissioner looks after the welfare of workers since 1968.

Labour Welfare under Plan Scheme

There is a large number of unprotected labour in Delhi employed in factories, shops and Commercial establishments. In view of this a number of schemes were introduced in the 6th Five Year Plan (1980–85) to provide them facilities of health, education, recreation, safety, literacy etc. The following schemes are meant to help the labour class:

1. Industrial Relations Department

The settlement of industrial disputes, enforcement of labour laws, running of Labour Welfare Centres etc. is done by this Department.

2. Industrial Peace Awards

Industrial peace is essential to boost up production. For this purpose, three Industrial Peace Awards based on lowest number of man days lost on account of

strikes, lock-outs, and other disputes and increase in production by 10% or more over preceding year, are given every year.

3. **Safety Awards**

The objective of these awards is to honour the factory management for outstanding achievement in preventing accidents within factory, and also the workers for making useful suggestions in the matter. Prizes are given to the winners selected by a committee constituted for the purpose.

4. **Factory Inspectorate**

This Department is entrusted with the enforcement of Indian Factories Act 1948, Payments of Wages Act 1936, Maternity Benefit Act and Punjab Industrial Establishment Act 1966 as extended to the Union Territory of Delhi. Each factory is inspected 3 to 4 times in a year and one inspector is allotted the supervision of 150 factories.

5. **Labour Welfare Centres**

There are 10 labour welfare centres in the Union Territory of Delhi, of which 2 have their own buildings. It has been decided to construct buildings for all the welfare centres. The activities of the labour welfare centres have greatly increased owing to the introduction of nursing classes, music classes, indoor games, training classes in knitting and embroidery etc.

6 **Study Tours for Industrial Workers**

This scheme is meant to provide opportunity to industrial workers to see the working of industrial units in other States. It also educates them by taking them around to important historical places. Two to three such tours are organised every year. The expenditure on travelling and daily meals of the participants is borne by the Department.

7. **Provision of Sewing, Knitting, Embroidery Machines**

Under this scheme, sewing, knitting and embroidery machines are provided to the families of the workers on hire-purchase basis. The cost of the machines is recovered in instalments from the pay of the worker and no interest is charged there on.

8. **Recreational Facilities to Workers in Villages**

With a view to providing recreation facilities to the labourers in rural areas the following measures have been introduced:

(a) Educative and entertaining film shows are organised in the villages at regular intervals. - At least three films are shown in a year.

(b) Sight seeing tours are organised within the Union Territory for the benefit of rural labourers.

(c) Tours lasting-five to seven days are organised to acquaint them with village small scale industries and agro-industries of other States.

9. **Holiday Homes for Industrial Workers**

There are about 9,00000 workers employed in shops and commercial establishments in Delhi. To provide them rest and recreation the Delhi Administration has set up one Holidy Home each at Mussoorie and Haridwar. 1,940 industrial workers and their families had availed of this facility by 1978–79. Besides, free accommodation one way rail or bus fare is also given to the workers availing of this facility. The conveniences available at Holiday Homes are extended to the workers on a token payment of Rs. 1 per day. It was proposed to open more Holiday Homes during the Sixth Plan.

10. **Mobile Hygienic Laboratory for Industrial Workers**

Under the Factories Act, 1948 each factory has to provide for statutory health and safety provisions for its workers. As medical examination in hospitals is time consuming mobile laboratories fitted with X-ray machines have been set up at work centres for the convenience of workers.

11. **Prohibition among industrial workers**

Under this scheme, wide publicity is given to the evils of drinking. The workers are educated in prohibition with the help of charts, leaflets, documentaries etc.

12 **Literacy among industrial workers**

The scheme aims at educating labourers so as to turn them into conscientious workers.

13. **Protection to unprotected labourers**

The number of unprotected labourers in the Union Territory is 50,000. Most of them are employed in loading, unloading and transportation of goods. A Board including representatives of labourers, employers, and the Government has been formed to look after the interest of these labourers.

14. **Labour Welfare Fund**

The fund is propsed to be set up in Delhi by extending the Bombay Labour Welfare Fund Act 1953. Contributions from employers and employees and a subsidy from Government will finance the fund, which will be supervised by a Board. All commercial establishments employing 10 or more workers will be covered under the Act. The Board will strengthen the existing labour welfare centres, run creches for the children of workers, supervise the scheme for Holiday Homes, conduct study tours and implement other welfare schemes.

15. **Industrial housing scheme**

The industrial workers who are covered under section 2(1) of the Factories Act 1948, and whose wages do not exceed Rs. 500 per month are eligible for allotment of subsidised houses. The number of such eligible workers stood at 1.15 lakh on 31st

March, 1977. But only 4844 houses have so far been constructed under this scheme. Besides these, 503 houses have been constructed by the employees and their cooperative societies with the help of loans.

Under this scheme, an employer can get fifty per cent of the total cost per house as loan and twenty five percent as subsidy from the Government for the construction of houses for workers. The State Government can also take up such construction provided the employer pays twenty five per cent of the actual cost in advance. The employers of Delhi have not availed of this facility. The burden of constructing such houses for industrial workers, therefore, falls on the Administration. Under the 6th Five Year Plan, it was proposed to construct 172 houses at Bodela, 172 at Okhla, 800 at Nand Nagri, 1200 at Badli and 600 at Hyderpuri making a total of 2944 houses.

CHAPTER VI

ECONOMIC TRENDS

Data required for the study of economic trends in rural Delhi are extremely limited. Some sketchy data suggesting short period trends are available for the urban parts of the Territory from the First World War onwards. But there is nothing to go by for an idea for trends in its rural economy which had retained its traditional subsistence value upto the Second World War. The subsequent era of planning created a demand for economic data about rural Delhi for the formulation of its development plans. So some data have as a result become available. These are insufficient but fairly reliable. These data deal with (i) the general level of prices, wages, standard of living and livelihood pattern (ii) the general level of employment in different occupations. shifts from agriculture to non-agriculture and unemployment and (iii) planning and community development since 1951.

Prices

Available evidence suggests self-sufficiency of the village economy in the Delhi Territory at the beginning of the twentieth century. Its operative features were barter system for trade and the *Jajmani* system. For its small surplus produce the Delhi city market constituted the main outlet. For village need of the services of blacksmith, carpenter, cobbler, teli, potter, washerman, barber, weaver, priest, teacher and the like functionaries, the *Jajmani* system was working satisfactorily. Each of these functionaries received from the agriculturist a fixed customary share of the agricultural produce for his services. The clothing requirements were met by home spun yarn, woven into cloth by the village weavers.

Cash transactions were limited to a few items not produced in the village. For some items of consumption like vegetables and fruits, not grown locally, exchange in kind, lingered till late 1960's. This system often worked to the advantage of knowledgeable traders. Food, clothing and even material for construction and repair of houses were met from local sources. The village traders provided for things like pickles, vegetables, fruits, condiments, pulses, gur, edible oil, kerosene, mill-made cloth and food grains which were in short supply locally. These goods were invariably supplied on credit and their prices were arbitrarily fixed by the seller. The daily requirements were obtained by the rural folk from the village shopkeeper. Large requirements for marriage or a social or religious functions were obtained from the city.

The position gradually changed when Delhi became the capital of India. With increased commutation to the city for employment and sale of agricultural products, the villagers often do their shopping in the city. Now most of the villages served by the

Delhi Transport Undertaking services are well connected by road to the city. This has reduced the dependence of the rural community on the village shop or the village trader.

The data on commodity prices in rural areas were not collected from village shops or fairs. Fair inference can, however, be made about the trends in rural prices from the corresponding trends in urban prices as both are inter-related owing to close proximity. The 1931 census, for the first time provided data for the period stretching back to the beginning of the First World War. They show a long term trend of increase as follows:

Table-1

Index Number of Prices of Selected Commodities

(Base 1912–14-100)

S. No.	Commodity	1915	1919	1923	1928
1.	Wheat	128	176	127	136
2.	Rice	100	165	129	220
3.	Gram	117	217	103	165
4.	Salt	100	155	194	133
5.	Sugar	64	129	156	304

(Census of India, 1931, Delhi, Report, Vol. XVI p. 21)

The prices in general were higher during the war and its aftermath. Of the above five items, wheat and gram were sold by the rural areas and they pruchased salt, sugar and some quantity of rice. During the war. the terms of trade were in favour of the rural areas. But in the post-war decade, the trend reversed. The prices of sugar and salt increased and those of wheat and gram decreased during 1919–23. In 1928, wheat and gram prices were much lower than the corresponding prices of sugar and rice

Then followed the great depression which hit the agriculture most. The prices of food grains reduced to about a half by 1933. A slow recovery followed but even in 1939, when the Second World War begun, the agricultural prices were lower by about 30 per cent as compared to their pre-depression level.

During the Second World War and its aftermath upto 1949, prices of wheat, gram, rice and sugar increased progressively. During this period, the price of wheat and rice trebled and that of gram and sugar doubled. Thereafter they stablised at 1944 level. But the prices of non-agricultural products showed a continual increase. As compared to 1939 in 1949, food items were costlier by about 200 per cent and the general level of consumer prices was higher by 250 per cent. During this entire period,

almost all essential commodities of domestic consumption were in short supply and their prices had remained subject to control. Controlled prices do not reflect the balance of demand and supply for the commodities in question. For most of these commodities, black market has operated to jack up actual prices. Table 2 shows the average monthly prices for important commodities. Some of them, were not controlled in the wholesale market.

Table-2

Range of annual wholesale prices of certain selected commodities in Delhi from 1944 and 1959 (rate per maund)

Commodities	1944		1949		1954		1959	
	Min	Max	Min	Max	Min	Max	Min	Max
Wheat	10.00	11.62	10.12	10.12	11.00	21.00	14.00	25.50
Gram	7.00	8.42	10.06	13.25	7.00	17.50	11.00	23.50
Jawar	6.00	8.00	13.50	17.00	5.00	15.00	10.00	17.50
Bajra	6.75	8.37	14.00	18.00	7.50	13.00	11.00	17.50
Barley	5.00	7.12	7.25	7.25	7.00	13.31	10.00	16.50
Rice	15.55	21.96	--	- -	14.00	25.00	20.00	28.00
Sugar	25.00	28.00	33.00	38.75	30.19	39.50	38.00	44.00
Gur	8.84	8.86	11.00	40.00	12.00	23.00	16.00	28.00
Ghee	118.00	175.00	210.00	235.00	165.00	208.00	200.00	235.00
Potato	3.00	35.00	2.25	30.00	3.50	20.00	6.00	170.00
Meat	32.00	45.00	42.00	60.00	55.00	56.00	60.00	75.00
Fish	60.00	100.00	50.00	80.00	25.00	140.00	30.00	100.00
Milk	16.00	20.00	20.00	36.00	14.00	26.00	20.00	30.00

The extent of seasonal variation in the average monthly prices of staple food grains and sugar in 1944 and 1949 is nominal, while for other commodities like potato, meat, fi h, ghee (pure), gur and milk it is well marked. The controls were suspended for a short time in 1948 and were withdrawn in early fifties. Thereafter large variations in the average monthly prices of food grains reappeared in 1954 and 1959. At harvest time, the prices are low and the recipients are farmers but during the off-season prices are such higher and beneficiaries are urban traders As compared to 1944, the minimum prices in 1954 were lower and their difference with the maximum prices much greater. Subsequently, both the maximum and minimum prices rose and the difference between them increased in several cases as is evident from 1959 figures. This indicates that trading margin had enlarged, to the benefit of the trader at the cost of the rural producer.

Table 3 presents the harvest price of some selected commodities in the Union Territory of Delhi (1950–51 to 1959–60)

Table-3

Harvest price (in Rs per maund) of some selected commodities, 1950–51 to 1959–60

Year	Rice	Jawar	Bajra	Maize	Wheat	Barley	Gram	Gur	Cotton	Tobacco
1950–51	35.50	12.00	16.00	18.00	19.00	13.00	18.00	20.00	80.00	40.00
1951–52	N.A.	13.33	16.00	16.00	16.00	13.06	20.00	16.00	80.00	30.48
1952–53	N.A.	13.33	13.91	16.00	15.24	13.33	17.78	19.39	80.00	26.67
1953–54	N.A.	7.62	12.31	13.33	18.29	10.00	13.33	13.33	45.71	21.33
1954–55	18.29	8.00	8.00	8.00	10.00	6.53	5.71	6.67	71.11	22.86
1955–56	18.29	8.00	8.65	8.42	16.41	10.00	10.49	16.41	27.83	26.67
1956–57	16.84	11.64	12.31	8.65	16.41	11.64	13.06	11.42	27.83	40.00
1957–58	22.86	10.00	12.30	10.32	16.00	11.03	13.06	N.A.	35.56	N.A.
1958–59	26.31	13.31	N.A.	15.31	15.83	12.16	13.25	17.50	56.65	51.00
1959–60	30.67	12.63	14.75	12.92	16.25	11.92	14.29	17.50	73.83	N.A.

Price of almost all commodities were higher in 1950–51 than in 1959–60. High 1950–51 prices are attributable to that year's poor harvest. Thereafter a general declining trend set in upto 1954–55. This was followed by a gradual increase. From the bottom of 1954–55, prices of most commodities had not recovered enough to regain the 1950–51 level by 1958–59.

Price index for food grains as well as for all commodities, including food items, are given below:

Table-4

Consumer price index 1951-61 (*Base* 1949-100)

Year	Food items only	General (all items)
1951	111	108
1952	110	108
1953	109	106
1954	106	105
1955	97	98
1956	112	109
1957	117	114
1958	117	113
1959	125	120
1960	120	120
1961	123	127

(Digest of Economics and Statistics for Delhi.)

Food grains prices had apparently yielded the ground to the non-food items over the decade taken as a whole. Their decrease between 1951 and 1955 was larger and the subsequent increase upto 1961 was smaller and erratic. For the following period, retail prices of selected commodities were compiled on the basis of the returns of mandies at Najafgarh, Narela and Mehrauli, serving the rural areas. Table 5 gives the average retail price of selected commodities for Najafgarh mandi (1960–79) providing an idea of the time trend of rural retail prices.

Price of each commodity shown varied from year to year during the period. Upto 1963, the variations are small; the 1963 prices of wheat, gram, moong, urad, mustard oil, gur and sugar were higher than in 1961, while those of lal mirch and milk were lower. The smallest rise and the largest fall were recorded by wheat and lal-mirch respectively. Prices of these commodities rose upto 1965, with the exception of urad dal which recorded a small decrease over the two years. Thereafter, while prices of individual commodities varied from year to year, there was no general trend

Table-5

Average retail price (in Rs. per kg.) of selected commodities at Najafgarh during 1960–79.

Year	Wheat	Gram	Dal Gram	Dal Moong	Dal Urad	Lal Mirch	Milk	Mustered Oil	Gur	Sugar	Vegetable oil
1960	0.41	0.71	0.43	0.56	0.59	3.54	0.61	1.92	0.42	1.06	2.25
1963	0.44	0.45	0.50	0.71	0.97	2.85	0.59	2.21	0.69	1.17	N.A.
1965	0.68	0.81	0.96	1.17	0.94	2.91	1.00	3.81	0.82	1.42	N.A.
1967	1.16	1.14	1.25	1.69	1.76	5.45	1.05	4.95	1.66	1.61	5.03
1970	1.03	1.10	1.28	1.44	1.45	6.86	1.37	4.95	0.75	1.98	6.22
1971	0.93	0.95	1.13	1.51	2.07	6.29	1.42	5.10	1.04	1.98	5.59
1972	0.94	1.17	1.34	2.08	2.52	5.43	1.45	5.30	1.85	3.36	5.44
1974	1.27	2.40	2.58	2.72	2.52	8.55	2.16	10.12	1.64	5.00	8.73
1975	1.53	2.26	2.74	2.89	2.76	12.59	2.33	7.27	2.04	5.17	12.11
1976	1.41	1.57	1.94	2.26	2.74	11.27	2.32	6.21	2.00	4.88	7.90
1977	1.32	1.70	2.07	2.55	3.37	9.57	2.35	11.39	1.80	4.50	9.68
1978	1.30	2.17	3.89	3.89	3.55	11.12	2.40	10.19	1.20	3.43	N.A.
1979	1.36	2.22	2.77	4.71	3.35	10.58	2.49	10.00	1.77	2.93	N.A.

(Bureau of Economics and Statistics, Delhi)

upto 1972. In the later year, all prices except that of wheat, were higher, in some cases substantially. Thereafter, the increase became general and rapid reaching the peak in 1975 for wheat, gram, gur, sugar and vegetable oil, in 1977 for mustard oil, in 1978 for gram and urad dal and in 1979 for moong dal. As compared to its beginning, the price at the end of this period was twice as high for wheat, gram, sugar and lal mirch, thrice as high for milk and gur, four times as high for mustard oil and vegetable oil and six times or higher for dals.

Wages

There are hardly any data on wages for the rural economy, which because of its subsistence nature had no labour market in the modern sense. Hired work was paid in kind; for the services of the family occupations like that of the black-smith, carpenter, potter, barber, weaver, shoemaker, a fixed customary share in the agricultural produce was given.

Since Independence, largely due to the impact of the growing metropolis, things have been changing. Masons and carpenters are now paid partly in cash and partly in kind for their work. They work longer than eight hours and receive cash wages often less than two rupees a day. Since there is organised market for their labour, the wages they receive are determined in the light of those prevailing in the adjoining urban areas. The 1931 Census report contains data on average monthly wages for selected categories of labour for the Delhi Territory as a whole. The following are relevant to the rural areas of Delhi:

Table-6

Average wages of selected categories of workers

On Monthly basis (Rs.)	1912–14	1919–21	1922–24	1925–28
Carpenter	30.00	58.00	48.00	54.00
Mason	30.00	47.00	40.00	45.00
Black-smith	27.00	46.50	41.00	45.00
Mochi	N.A.	25.50	22.00	24.00
Potter	N.A.	N.A.	33.50	36.00
On daily basis (Rs.)				
Coolies-Men	0.44	0.75	0.56	0.66
Coolies-Women	0.31	0.50	0.44	0.44
Coolies-Minors	0.15	0.25	0.19	0.25

The general level of wages had substantially risen during the First World War. Then followed a considerable decline during 1922–24, followed in turn, by a revival to levels, lower than those of 1919–21. For the specified categories of workers, such as the carpenters, the increase during the war was the highest. *Mochis* (shoe maker) were the

lowest paid category throughout. The wage rate for the unskilled labourers was comparatively low all through. Among them minors received a little more than a third and women about two-third of the wages for men.

For the subsequent period upto the fifties, no data on wages are available. Wage data for agricultural workers were collected at three points of time in 1950–51, 1956–57 and 1964–65. For the former two dates, the average daily earnings of casual agricultural labourers are available for Delhi, Punjab and Himachal Pradesh taken together, while for 1964–65, separate data are available for Delhi. Economic and agricultural conditions of rural Delhi do not sharply differ from those of Punjab and so the combined wage rates reflect the trends for the Delhi Territory as well.

These data given in the following table show that the wage rates for male and female labourers were higher in agriculture sector than in non-agriculture sector in 1950–51 and 1956–57, but were lower in 1964–65

Table-7

Average daily earnings of labourers during 1950–51, 1956–57 *and* 1964–65

	Ploughing	Weeding	Trans-planting	Harves-ting	All agri-cultural operations	Non-agri-cultural operations.
1950-51						
Man	1.84	1.69	1.60	2.68	1.84	1.82
Woman	--	1 23	0.78	3.26	1.34	0.93
1956-57						
Man	2.08	1.73	1.34	2.47	1.98	1.38
Woman	—	1.24	1.00	1.40	1.22	0.40
1964-65						
A. Agriculture Labour house-hold						
Man	1.75	2.16	1.75	--	1.75	2.24
Woman	1.60	—	1.75	4.20	1.62	1.50
B. Rural labour household						–
Man	1.75	2.13	1.75	--	1.78	3.87
Woman	1.60	2.00	1.75	4.20	1.57	1.67

Indian Labour Statistics, Labour Bureau, Simla. (Data for 1950-51 and 1956-57 is combined with Punjab and Himachal Pradesh).

It will be seen that the average daily wage rate is highest for harvesting and lowest for transplanting. The former was more than double than the latter in 1964–65. The wage rate for harvesting shows a large increase over the period covered by the table.

For transplanting and weeding, the increase was nominal and for ploughing, there was in fact a decrease in the wage rate over the period. Interestingly, the wage rates in agriculture show a decline in wage rate for men in comparison to women. The data for 1964–65 are more detailed as they differentiate between agricultural labour and rural labour households. This is clear in the following table, which also gives the consumer price indexes with 1950–51 as the base year.

Table-8

Index numbers of consumer price and wage in Delhi

Base 1950–51—100

Year	Consumer Price index	Index of Wages			
		Agricultural Operations		Non-agricultural operations	
		Men	Women	Men	Women
1950–51	100	100	100	100	100
1956–57	109	108	91	76	43
1964–65	147				
(i) Agricultural labour households		95	121	123	161
(ii) Rural labour households		97	117	212	179

Between 1950–51 and 1964–65, consumer prices rose by 47 per cent whereas there was marginal decline in the wage rate for agricultural operations for men as against women. For non-agricultural operations, the rise in wage rate outpaced the rise in prices for men in rural labour households.

In 1948, various industries and services in the Union Territory of Delhi were brought under the purview of the newly passed Minimum Wages Act. Minimum wages for various categories of workers in each industry and service, that were then announced and revised from time to time, are shown below:

Table-9

Minimum daily wages (in Rs.) in some selected industries since 1948.

Industry	Before 1953	1963	1964	1966	1970	1971	1973	1975	1976
Agriculture	1.50 to 2.00					4.00	5.00	6.75	
Unskilled labour Min.					1.50	2.50	2.88	4.00	4.50
Max.					3.50	4.50	5.00	5.25	6.75
Stone breaking	1.75	1.75 2.00	2.50				4.50		6.75
Brick making		2.00			3.50	4.25	5.00	6.50	
Pottery				2.37		3.37	4.50		

(India–Labour Bureau, Simla)

The table includes only those five categories of workers who served in rural areas. For the category of unskilled labour, fixation of minimum wage has usually been the lowest. The revision were not uniformly applied in respect of all categories of workers. Wage rate for stone-breaking alone was revised in 1964. It was only in 1973 that the revision affected all the categories of workers.

Consumption Pattern and Standard of Living

No definite trend in the consumption pattern and standard of living is available for the rural areas for want of requisite time series data. But these rural areas form the immediate hinter land of the Delhi metropolis, which has witnessed rapid increase in population and prosperity since Independence. Consequently, they have benefitted from their proximity to metropolis. Rapid population growth of the metropolis has greatly expanded the scope for the sale of rural products. The close contact with the urban parts of the Territory has thus considerably influenced the rural life.

The influx of a large numbers of displaced persons from west Pakistan into Delhi brought about a marked change in the life of the city. Slowly this change also spread into rural areas. The land rich families, some of whom had received considerable cash compensation for their land, acquired by the Government for the expansion of the Delhi city, were the first to be influenced in this respect. Slowly but inexorably this metropolitan influence is erasing the differences in the life style between the urban and rural parts of the Territory. This is indeed leading to disruption of rural social structure.

Before the Second World War, the depression had turned the terms of trade against agriculture in particular and rural products in general. This obviously led to a deterioration in rural living standard. Added to this, the incidence of unemployment and under employment tended to increase during the depression. Subsequent period of the war and its aftermath was marked by inflation and control of prices and movement of agricultural products. This adversely affected the honest producer but expanded the scope for smuggling from and to Delhi thus, helping the middle-man. On the whole, the rural population remained at a great disadvantage.

The first enquiry into family budget in Delhi was conducted in 1943-44 at the instance of the Deshpande Committee for industrial workers, the results of which are summarised in the Table below:

Table-10

Income and expenditure of a working class family by income groups in 1943-44

Monthly income groups	Av. no. of persons per family	Av. monthly income per family	Av. total monthly expenditure per family	Distribution of monthly expenditure					
				Food	Fuel & lighting	House rent	Cloth & footwear	Households requirement	Misc
30	2.44	24.60	34.11	62.65	9.73	6.60	12.34	—	8.68
30–40	3.04	34.03	40.80	60.29	9.96	7.38	11.58	1.07	9.72
40–50	3.14	41.07	45.03	61.00	9.76	7.59	10.80	0.98	9.87
50–60	3.51	53.82	53.22	62.07	9.55	6.47	10.34	1.31	10.26
60–70	3.83	63.02	57.52	61.76	9.05	6.08	9.43	3.05	10.63
70–80	4.01	73.90	66.26	60.87	8.43	5.96	9.70	4.17	10.87
80–90	4.83	83.98	74.36	61.35	8.87	6.16	8.66	2.16	12.80
90–100	4.54	93.25	80.88	62.67	8.00	5.59	8.00	4.72	11.02
100 & above	4.86	127.69	97.94	57.95	7.37	6.15	7.44	7.34	13.75
All income	3.80	66.30	66.60	60.98	8.84	6.35	9.13	3.27	11.43

An average family with 3.8 members had on the average a monthly income of Rs. 66.30, a monthly expenditure of Rs. 60.60 and a monthly saving of Rs. 5.70. The average family size increases with income. Expenditure exceeds income for the three low-income groups, the excess being the maximum for the lowest among them. The remaining groups show a margin of savings, the highest income group recording a saving of nearly 30 per cent of income.

Comparative item-wise distribution of the family budget, for different income groups shows that food accounted for the major share in the budget of all income groups. It amounted to more than 60 per cent of the total for all groups, barring the highest. Share of fuel, rent and clothing, tends to decrease with increase in income. The other two items, i.e. household requirements and miscellaneous, show in general an opposite trend.

A family budget inquiry of industrial workers was done in 1958–59. Prior to this, an all India Family Budget inquiry was conducted in rural areas in 1956–57. This covered Delhi along with Punjab and Himachal Pradesh. The data from these three inquiries is given in the following table in a summary form.

Table-11

Comparative level of consumption for industrial workers and agricultural families 1943–44, 1956–57 *and* 1958–59.

	1943–44 Industrial families in urban areas	1958–59 Industrial families in urban areas	1956–57 Industrial families in rural areas (x)
Average family size	3.80	3.46	4.79
Adult consumption units	3.12	2.82	N.A.
No. of earners per family	1.34	1.12	1.77
Average monthly family income	66.31	128.69	61.00
Average monthly family expenditure	60.59	134.88	88.83
Per cent expenditure on food	60.98	51.07	71.30

(x) Combined data for Delhi Punjab and Himachal Pradesh.

The timing of the second inquiry of industrial workers and that of agricultural families is close enough to permit a comparative view. Agricultural families are larger in size with a greater number of earners per family. Their average income, however, is about half to that of industrial workers' families. Expenditure is likewise smaller for the rural families. Both industrial worker and agricultural families showd an excess of expenditure over income. Interestingly, this excess is larger for the rural families not only in relation to income but also in absolute terms. For agricultural families, expenditure exceeds income by nearly Rs. 28 while for industrial workers, only Rs. 11. Even so, the proportion of expenditure on food by agricultural families is much greater than by industrial workers families.

A more detailed data was collected in 1972–73 in the 27th round of NSS, from a sample of 391 households from 36 villages. The data when put along side with the corresponding data for the urban sample comprising 477 households of the NSS 28th round conducted during 1973–74 is revealing. This data is summarised in the accompanying table.

Table-12

Percapita monthly expenditure (in Rs.) in rural area (NSS 27th Round, 1972-73) and urban areas (NSS 28th Round, 1973-74) in Delhi and per cent distribution of per capita expenditure by items of consumption in different expenditure classes in rural Delhi.

	Per capita expenditure (in Rs.)		per cent of expenditure		Per cent of per capita expenditure in rural Delhi						
	Rural 1972-73	Urban 1973-74	Rural 1972-73	Urban 1973-74	Below Rs. 28	Rs. 28-34	Rs. 34-43	Rs. 43-55	Rs. 55-75	Rs. 75-100	Rs. 100 &over
1	2	3	4	5	6	7	8	9	10	11	12
Cereals	15.23	12.11	21.7	12.38	52.5	38.2	34.2	30.5	22.9	19.2	9.2
Pulses	1.64	2.35	2.3	2.40	2.5	3.1	2.9	2.9	2.7	2.3	1.1
Milk &	14 02	15.15	20.0	15.48	8.7	8.5	11.8	20.5	28.5	23.6	12.5
Products	2.25	6.22	3.2	6.35	3.7	5.5	5.0	4.4	3.8	2.4	1.5
Meat, Egg & Fish	0.54	2.82	0.8	2.88	0.2	0.9	0.8	1.1	0.7	0.8	0.3
Vegetables	2.97	5.49	4.2	5.61	5.3	6.6	5.9	5.7	5.2	3.8	2.3
Fruits & Nut	0.56	2.83	0.8	2.89	0.1	0.1	0.6	0.9	0.8	0.4	0.7
Sugar	3.17	3.14	4.5	3.21	6.8	5.6	6.4	4.6	3.9	5.9	2.4
Salt & Spices	1.25	1.75	1.8	1.79	2.5	2.7	2.9	2.2	1.8	2.0	0.8
Beverages & Refreshments	1.38	5.20	2.0	5.31	1.0	2.0	2.3	1.5	1.9	2.8	1.2
Pan Tobacco & Intoxicants	1.65	2.49	2.4	2.54	3.0	5.0	2.4	3.4	2.0	2.0	1.1
Food : Total	44.66	59.55	63.7	60.84	86.3	79.2	74.2	77.7	74.2	66.2	33.1
Fuel & Light	3.01	5.80	4.3	5.93	7.5	6.2	6.2	5.5	4.4	4.3	2.0
Other Misc.	10.41	18.09	14.8	18.48	5.0	11.3	11.6	10.1	12.3	19.4	16.0
Taxes & Rent	0.16	5.63	0.2	5.75	—	0.1	0.4	0.0	0.0	0.5	0.4
Durable Goods	5.06	2.80	7.2	2.86	—	0.2	1.4	0.5	0.3	3.3	33.8
Clothes	6.14	5.27	8.8	5.38	1.1	2.7	5.7	5.0	7.8	5.6	13.8
Footwear	0.70	0.74	1.0	0.76	0.1	0.3	0.5	1.2	1.0	0.7	1.1
Non Food	25.48	38.33	36.3	39.16	13.7	20.8	25.8	22.3	25.8	33.8	66.9
Total	70.14	97.88	100.0	100.00	100.0	100.0	100.0	100.0	100.0	100.0	100.0

The table shows that per capita monthly expenditure was Rs. 70 for the rural household as against Rs. 98 for the urban. The pattern of the budget indicates that a rural household spent on an average Rs. 45 per person on food alone, which included imputed values of home grown products, while the corresponding figures for an urban household was Rs. 60. Notable among the items for which per capita urban expenditure exceeded the rural are taxes, rent, fuel, lighting and miscellaneous. Expressed in percentage terms, the differentials narrow down; even so the rural household allocate greater share of total expenditure to food at the cost of the non food items.

For rural households, own produce account for about 30 per cent of the total expenditure; cash purchases from the market took care of the rest. Major among the items of home produce are cereals, milk products and fuel and lighting; these three items respectively show 45, 74 and 34 per cent as the share of home produce in the total. Significantly, own produce contributed nominally to the household consumption of pulses, vegetables and edible oils.

Classification of the rural households according to expenditure levels shows that the share of food varied inversely with increase in expenditure. It is as high as 83 per cent for the lowest group, but drops to 79 per cent for the next higher group. For the three successive higher groups it remains stable but progressively decreases to reach a level of 33 per cent at the top. Cereals account for the largest share in the lower four groups while in the higher three groups the largest share is claimed by milk and milk products.

In absolute terms, the lowest group spends Rs. 12 per capita on cereals, and the highest group, Rs. 35. This suggests that the difference is not merely in the quantity, but also in the quality of cereals consumed. On pulses, the lowest group spends only about 5 paisa per person per month and the highest, more than Rs. 9. Similarly, on milk and milk products, the lowest and the highest groups spend per person per month Rs. 2 and Rs. 20/- respectively. The rich are indeed better fed than the poor.

The share of the non food items in the family budget, progressively increases with increase in per capita expenditure. Among them the share of fuel and light, however, shows an inverse relation with expenditure. The items which share the progressive increase as we move up the expenditure classes, are clothing, footwear, durable goods and miscellaneous items. Progressive increase of the share of clothing and footwear, goes up from 1.2 per cent for the lowest to as much as 14.9 per cent for the highest expenditure group. For miscellaneous items, the sum jumps up from 5 to 16 per cent. About durable goods, the progression is not even as they hardly figure in the budget of the lower groups. It rises from 3.3 per cent for Rs. 75–100 group to 33.8 per cent for the highest group. Significantly, durable goods account for more than half of the expenditure on non food items for the group at the top. The pattern of expenditure on

non-food items is vastly different for the highest expenditure group. The corresponding figures are Rs. 1.80, 10.4 and 5.1 on clothing and foot wear, miscellaneous items and durable consumption goods respectively for the sample as a whole but Rs. 53.4, Rs. 34.3 and Rs. 130.00 respectively for the highest expenditure group. All this suggests that rural affluence of the few is no less pernicious than the more conspicuous urban in relative terms.

Assets, Liabilities and Indebtedness

Indebtedness has been and continues to be a major problem of our agricultural economy. This is attributed to the character of the agriculture as an economic activity. As long as agriculture was conducted within the traditional or customary self- sufficient barter economy, indebtedness did not appear to be a major problem. But with the introduction of the cash transaction all round, combined with land becoming alienable asset, indebtedness became much too easy for the peasant to acquire. Peasants incur debt both for productive and for non-productive social, religious and cultural purposes.

The extent of indebtedness has varied historically with the variations in the state of agriculture. During the depression, for example, there was a considerable growth of indebtedness, while during the Second World War, there was an easing of the situation. Then followed an adverse long phase of inflation accompanied by price controls, invariably encompassing agricultural produce. The situation has since remained fluid and rural indebtedness became, at times a topic of great importance. Legislative measures on the one hand and encouragement to cooperative credit on the other have therefore, been resorted to during these years.

The history of credit cooperation and legislation on rural indebtedness is a long one. Several attempts have been made in the past to investigate this problem, the first and most comprehensive of which was the one by Provincial Banking Enquiry Committee in 1929-30. After Independence, the incidence of indebtedness in rural areas was recorded in the 14 census village monograph of the Delhi Territory prepared around 1961. Some data are available also from the rural labour enquiries of 1964-65 and 1974-75 and the Reserve Bank of India survey of 1971-72. The data from the former two are summarised below to provide a comparative idea of the change between 1964-65 and 1974-75.

Table-13

Indebtedness in rural labour households

		All households		Scheduled Caste households	
		1964–65	1974–75	1964–65	1974–75
1.	Average debt (in Rs.) per household	353	305	530	413
2.	Average debt (in Rs.) per indebted household	1048	1188	1145	1342
3.	Nature of Loan				
	(a) Hereditary (in Rs.)	67	—	30	—
	(b) Cash (in Rs.)	848	1155	905	1342
	(c) Kind (in Rs.)	9	33	11	—
	(d) Cash & Kind (in Rs.)	124	—	149	—
4.	Purpose of Loan				
	(a) Consumption	505	430	598	817
	(b) Marriage	335	758	376	525
	(c) Production	—	—	—	—
	(d) Other	206	—	171	—
	(e) More than one	—	—	—	—
5.	Source of Borrowing				
	(a) Cooperative	55	251	57	566
	(b) Employer	87	—	104	—
	(c) Money Lender	167	378	97	766
	(d) Shop Keeper	24	33	29	—
	(e) Bank	—	—	—	—
	(f) Others	715	524	848	—

The data relate to all labour households; those belonging to scheduled castes from among them are shown separately. During the decade covered by the two inquiries average debt per rural labour household seems to have come down. But this average is based on the total number of households indebted or not indebted. When the average is limited to the indebted households, the average shows an increase Evidently, the proportion of households in debt had decreased over the decade but the average debt has increased. The proportion of those in debt had decreased from 35 per cent to 26 per cent for all households and from 46 per cent to 31 per cent for the

scheduled castes sub group. As compared to others, the scheduled caste households showed a larger proportion of those in debt both in 1964-65 and 1974-75, even though the reduction in the proportion was more substantial in their case.

A part of the indebtedness was hereditary for the scheduled castes as well as for rural labour households in 1964-65. This part was absent in 1974-75. Similarly, a small part represented a combination of cash and kind debts in 1964-65; this too disappeared in 1974-75. A small part of the indebtedness represented loans in kind, which in 1964-65 was a slightly more important component for the scheduled caste households. Significantly, while loans in kind disappeared for the scheduled castes in 1974-75, there was an increase in the relative importance of such loans for the rest of the rural labour households. Cash loans completely replaced the other loan types in the course of the decade.

Among purposes for contracting loans, consumption and marriage preponderated in 1964-65. In 1974-75, these were the only reasons for loans. This is true of both the scheduled caste and the other households. The two inquiries did not reveal any loans taken for productive purposes. Rural indebtedness thus reflects economic poverty as well as a tendency to maintain social status connected with marriage ceremonies.

Among the creditors, banks have played no role. In this an important role has been played by the category of 'others', which included relatives and friends. By 1974-75, their importance reduced for other rural labour households and completely disappared for scheduled caste households. A large part of these people presumably shifted to the money lenders. If so, the needy scheduled caste households were thrown into the lap of money lenders to a greater extent in 1974-75 than in 1964-65. There was an increase of Rs, 197 in the average amount of debt in the case of scheduled caste households. This increase plus the 1964-65 loans obtained from employers and shopkeepers is reallotted in 1974-75 to two sources i.e cooperatives and money lenders. As for cooperatives, there was an increase in their relative importance, as shown by the average amounts, at the cost of the money lenders as well as of the other categories specified in the table. The obvious conclusion is that cooperatives could not displace the money lender as a source of credit for the rural labour households during the decade.

From the Reserve Bank Survey, we have no direct data on indebtedness. The survey, however, tried to assess liabilities expressed in terms of their money value. These liabilities can be broadly taken to represent the indebtedness of rural households including those of artisans, agricultural labour and other non-cultivators. The survey suggests that their average debt was Rs, 493 in 1971-72; this is in line with the figures for 1964-65 and 1974-75. There was a consistent decreasing trend in the average indebtedness of rural labour households during the decade 1964-74.

The Reserve Bank Survey calculated liabilities for different types of rural households. According to these calculations, the average of liabilities is the lowest for agricultural labour households and the highest for artisan households. Cultivating households are close to artisans in this respect. The average amount of liabilities for all rural households was Rs. 630.

The Survey also attempted an assessment of the value of assets with rural households. In Delhi, this data was collected from 36 villages falling in the National Sample Survey frame. The data indicate considerable inequality in the rural society. Land is the principal asset but it is owned only by 36 per cent of the households, most of it with the owner cultivators themselves. The more commonly owned asset is the house, used as dwelling. Implement and simple machinery is generally owned by cultivators as well as by artisans but only about one third of the agricultural labour households reported ownership of implements. The shares and deposits, the newer forms of investment, were reported by about 8 per cent of the households. Both these related to cooperative institutions. About the value of assets we get the table of average from the survey. (See Paga 202).

The average amount of assets per household comes to nearly Rs. 23,000 for the sample as a whole. The average is nearly Rs. 46,000 for the cultivators as against Rs. 3,600 for the artisans The disparity in ownership of assets is marked between the cultivating and non-cultivating households, the average for the former is over seven times higher than the latter.

If we take land, live stock and implements, as productive assets, they account for 70 per cent of all assets owned by all households. This proportion is 79 per cent for cultivating households, 19 per cent for artisans, 34 per cent for agricultural labour and 26 per cent for other non-cultivating households. The non-productive assets account for the bulk of investment for non-cultivating households. These include houses, accounting for 17 per cent of the assets for cultivating households and 50 per cent for agricultural labour households. The corresponding figures for artisans and other non-cultivating households are 67 and 57 per cent respectively. Among the productive assets live stock is an important item for non cultivating classes. This is particularly true of artisan households, which have meagre land, and agricultural labourers. Livestock claim 5.5 per cent share in the assets of the cultivators but in the case of artisans and agricultural labourers, the figures are 1.0 and 14 per cent respectively.

Livelihood Pattern

The term livelihood was used in the 1951 Census to indicate the area of economic activity on which people depended for living. All persons including non-workers were classified according to the source or the broad sector of the economy from which the main earner of a household received income. Livelihood classification of the 1951 Census population is comparable to the industry classification of workers adopted in the 1961 and 1971 and also for the earlier censuses. The broad nature of economic

Table-14

Average value of assets in Rupees in different forms in various types of rural households in Delhi, 1971-72.

Types of household	Land	Vacant land	Live stock	Imple-ments	Productive assets(1)&(4)	Buildings	Durable goods	Total (5)to(6)	Shares &deposits	Total
1. Cultivating	31,317	172	2,510	2,120	36,119	7,561	1,306	8,867	633	45,619
2. Agriculture Labour	931	7	683	65	1,639	2,461	354	2,815	429	4,933
3. Artisans	34	19	364	289	706	2,417	449	2,866	37	3,609
4. Other Non-cultivating	1,207	14	513	372	2,106	4,562	502	5,064	885	8,055
5. All Non cultivating	891	14	509	300	1,714	3,714	466	4,180	612	6,506
6. All Households	13,483	80	1,337	1,053	15,953	5,303	813	6,116	620	22,689

activity and changes therein may be depicted on the basis of the livelihood or industry classification of the workers.

First we refer to the working force participation rate, which is defined as a percentage of the population who actually participated in economic activity or received an income there from. Table 15 shows the participation rate for both sexes in rural and urban areas of the Union Territory from 1931 to 1971.

Table-15

Per cent of workers among males and females 1931--71

		Male	Female	Both
Rural	1931	50.0	25.9	41.4
	1951	57.8	17.4	39.3
	1961	47.9	22.0	35.7
	1971	45.2	4.2	26.6
Urban	1931	64.7	7.6	41.0
	1951	59.1	5.4	36.1
	1961	52.6	4.5	31.7
	1971	51.2	4.8	30.6
Territory	1931	61.2	13.4	42.2
	1941	59.3	3.0	38.2
	1951	58.9	7.7	32.6
	1961	52.3	6.5	32.1
	1971	51.2	4.8	30.6

It is evident that both male and female participation rate gradually decreased for urban as well as rural population. Further the rural participation rate has generally been higher than the urban. Male rate has, however, been higher in the urban areas. The female participation rate in rural areas which showed a sharp fall between 1931 and 1951, improved considerably during the following decade and finally recorded a steep fall during 1961--71. For the urban areas, it showed a continuous decline till 1971. The urban female rate had been much lower than the corresponding rural rates except for the Census of 1971. The variation in the participation rates is attributable partly to inter-censual changes in the definition of workers. In 1961, it was liberal and in 1971 stringent. The definition changes affected females much more than the males. The females participation in economic activity is related to family income. With rise in family income, female rates tend to decline, presumably because they often participate in economic activity only to supplement the earnings of the male members.

The census data on economic activity provide us an idea of the structure of the economy and the changes brought in it over a period of time. The changes in the relevant concepts and definitions as well as in their application in the field operations from census to census create considerable difficulty in the analysis of time trends. However, attempts have been made to maximise inter-censual comparability of these data. We quote below from one such attempt. The industry wise distribution of workers for four censuses between 1921 1971 is given below:

Table-16

Percent distribution of workers according to industry

	I Culti-vation	II Agro.-labour	IIIA Live stock forestry fishing	IIIB Mining & &Quarry-ing	IV&V Manu-facturing	VI Constru-ction	VII Trade & Com-merce	VIII Transport Communi-cation	IX Other Services
Rural									
1921	49.4	13.0	1.6	1.0	19.1	0.7	3.8	2.6	11.3
1931	52 3	11.2	1.3	0.7	15.2	1 7	5.3	3.5	9.5
1951	38.0	9.3	0.1	0.0	12.0	2.5	7.3	2.2	28.6
1961	46.7	5.7	3.0	3.7	14.2	2.6	2.7	2.0	19.4
1971	24.2	10.5	1.2	2 7	21.2	3.2	4.4	6.9	25.6
Urban									
1921	2.4	0.3	1.5	0.1	22.8	8.4	21.8	7.0	35.7
1931	1.9	1.0	2.8	0.2	21.9	6.5	17.2	8.4	40.0
1951	0.3	0.1	0.3	0.1	18.3	11.1	24 5	6.5	38.9
1961	0.7	0.2	0.7	—	22.5	4.4	19.3	6.3	46.0
1971	0 5	0 3	0.8	—	24.0	5.5	21.5	9.6	37.8
Total									
1921	19.1	2.7	1.8	0.1	21.6	6.7	18.1	5.9	24.0
1931	19.9	4.1	2.3	0.2	19.7	5.4	14.4	7.6	26.4
1951	7.4	2.2	0.3	0.1	17.3	7.9	19.8	5.7	39.3
1961	6.5	0.9	0.6	0.4	21.9	4.1	17.2	5.8	42.6
1971	2.6	1.2	0.8	0.3	23.8	5.3	19.9	9.4	36.7

As expected, a major difference between the rural and urban pattern of industry wise distribution of workers is the overwhelming preponderance of agriculture in rural areas. Similarly the shares of agriculture related activity of livestock raising, forestry and fishing as well as of mining and quarrying are higher in the rural pattern. For the remaining four categories, the urban share is much larger. This comparison refers to the Delhi Territory only. It is, however, evident that rural Delhi differs markedly from the rural areas of the country as a whole. Relative importance of manufacturing and other services, is much greater in the Delhi Territory than in rural India as a whole; the share of manufacturing in the working force of the Territory was as high as 21 per cent. The obvious fact is that the rural areas form a fringe around the Delhi metropolis and are well connected with it.

In rural Delhi, there has been a trend of diversification of economic activity, particularly since 1961. The changes are rapid and far reaching. In any case, between 1931 and 1971, there has occurred substantial reduction in the share of cultivators in the working force. Similar but much smaller reduction have occured in the shares of agriculture, labour and live-stock, forestry and fishing. Corresponding increase is shared by all the other categories. Among them, the gain is more substantial for other services and quite significant for transport and communication. However, none of the industrial categories displayed any consistent time trend during the period 1921-1971, the exception being 1951, when the census had introduced the concept of livelihood to categorise the total population as of earners, earning dependents and dependents, replacing the concept of work or economic activity.

Table-17

Distribution of workers by broad sectors (in per cent)

		Primary I+II+III+IIIB	Secondary IV+V+VI	Tertitary VII+VIII+IX
Rural	1921	65.0	19.8	15.2
	1931	65.5	16.2	18.3
	1951	47.4	14.5	38.1
	1961	59.1	16.8	24.1
	1971	38.6	24.5	36.9
Urban	1921	4.3	31.2	64.5
	1931	5.9	28.2	64.5
	1951	0.8	29.3	69.9
	1961	1.6	26.9	71.5
	1971	1.6	29.5	68.9
Tertiary	1921	23.7	28.3	48.0
	1931	27.0	25.1	47.9
	1951	10.0	25.2	64.8
	1961	8.4	26.0	65.6
	1971	4.9	29.1	66.0

To sharpen the comparative focus on time or between rural and urban areas, we may collapse the above table to obtain a tripartite division of the economy into the primary, secondary and tertiary sectors. The primary sector comprises cultivators, agricultural labourers, and those engaged in live stock, forestry fishing, mining and quarrying; the secondary sector, manufacturers and construction worker and the tertiary sector, traders, transporters and people engaged in storage communications and others services.

The rural economy is marked by the preponderance of primary sector. In the urban economy, the tertiary sector is dominant. The preponderance of primary sector in rural economy has gradually witnessed a reduction. In the urban sector, the preponderance of other services is maintained. Comparing the position of the shrinking rural part with that of the Union Territory as a whole, the former was more balanced in 1971 than in 1921 and the later in 1921 than in 1971. A major change in the rural economy has been the gain accruing to the secondary and tertiary sectors at the cost of the primary sector. The later claimed a share of 65 per cent in the working force in 1921 and of only 39 per cent in 1971. The share of the tertiary sector had risen between these two dates from 15 to 37 per cent and that of the secondary sector from 20 to 25 per cent.

About the shift of workers from one industry to another, attention may be confined to data for males of the last three censuses of 1951, 1961 and 1971, for the reason that changes in concepts and definitions used in the enumeration of workers has greatly vitiated inter-census comparison in respect of females especially in rural areas. The number of male workers in the rural sector had increased from 77,106 in 1951 to 77,475 in 1961 and to 1,03,576 in 1971. This increase occurred despite reduction in the number of villages from 340 in 1951 to 251 in 1971; 89 villages had been absorbed in the sprawling metropolis during these two decades.

The 1961 Census, thanks to the change in definition of work, showed a large increase in the number of cultivators 40,741 from 29,592 in 1951. The 1971 census again due to definitional changes, showed their number low at 26,363. The number of agricultural labourers had increased by about four thousand over these two decades. The number of workers engaged in mining and quarrying increased from 14 in 1951 to 3,137 in 1961; then followed their reduction to 2,588 in 1971. Manufacturing, construction and transport, storage and communication each show a progressive increase in the workers. In manufacturing sector, the increase between 1951 and 1971 was from 9,158 to 19,957, in construction sector from 1,877 to 3,385 and in transport, storage and communication sector from 1,725 to 7,621.

Trade, commerce and other services recorded a decrease in 1951-61. The latter increase did not fully compensate for trade and commerce but for the 'other services', it showed an overall increase from 22,553 to 23,377 for the period as a whole.

On the whole, there was a shift from culculation to manufacturing and other services. Other sectors, which had gained in relative importance are transport, storage, communication, construction, mining and quarrying.

Information on unemployment is available from census reports, Employment Exchanges, and the National Sample Surveys. Employment Market Information and Employment Exchanges do not give separate data for rural areas. The Bureau of Economics and Statistics helped the NSS to collect the requisite information in its 32nd round in 1977-78. This survey covering 240 urban Blocks and 16 rural villages was carried out in four sub rounds. It covered 1,626 households with 13,399 persons in urban areas and 192 households with 1,038 persons in rural areas.

The decennial population censuses provide information on non-workers but not on persons seeking jobs, i.e. those who consider themselves as unemployed. The NSS report gives detailed estimates of the population, working age groups and the labour force. It estimated the population of the Territory at 58.7 lakhs, of which 53.4 lakhs lived in urban areas and 5.3 lakhs in rural areas. Of the rural population, 2.7 lakhs were not in the labour force i.e. they were neither working nor seeking work. Of the remaining, 2.6 lakhs were employed and 0.3 lakhs were unemployed. A detailed comparative employment situation in rural and urban areas is as follows:--

Table-18

Per cent distribution of estimated no. of persons within and outside the labour force according to activity status, sex, and usual activity

Activity Status	Rural			Urban		
	Male	Female	Total	Male	Female	Total
A. Employed: Total	35.9	5.0	22.3	46	--	23.6
1. working in household enterprises	15.9		10.2	15.5	1.8	9.3
2. Working as salaried employees	16.0	0.9	9.3	27.6	4.2	16.8
3. Working as casual wage labour	4.0	1.2	2.8	3.8	1.0	2.5
B. Unemployed: Total						
4. Not working but seeking and available for work	5.3	0.7	3.3	3.5	1.3	2.4
C. Labour force (A+B)	41.2	5.7	25.6	50 4	8.3	31.0
D. Out of labour force Total	7.8	18.6	25.8	10.0	50.2	28.5
5. Students	7.4	3.5	5.6	8.7	7.1	8.0
6. Domestic uties	—	35.1	15.5	0.3	40.0	18.5
7. Others	0.4	10.0	4.7	1.0	3.1	2.0
E. Working age (15-59): Total	49.0	54.3	51.4	60.4	58.5	59.5
F. Non-working age population	51.0	45.7	48.6	39.6	41.5	40.5
Total population	100 0	100.0	100.0	100.0	1000 0	100.0

The labour force participation rate is higher in urban than in rural areas; this is true of both males and females. The urban rate for males is 50 per cent as against the corresponding rural rate of 41 per cent. For females, the urban rate is 8.3 per cent and the rural rate 5.7 per cent. The unemployed constitute a somewhat smaller proportion in the urban population. Incidence of unemployment is smaller among males in the urban and among the females in the rural part of the Territory. The proportion of persons outside the labour force in the population is higher in the urban than in the rural areas. This is uniformly true for all the three activity categories. For example, 40 per cent of women are engaged in domestic duties in the urban and 35 per cent in the rural areas. Significantly there are some urban males engaged in domestic work. The proportion of non-working age population, is higher in urban than in rural areas and that to a greater extent for males than for females.

The employment status classification of workers shows that the proportion of salaried employees is much greater in urban than in rural areas both for males and females. Next in importance are those employed in household enterprises. They constitute a somewhat larger proportion in rural areas; much more so for females than for males. Incidentally, the relative importance of casual labour among the workers is almost the same for both the sexes in urban and rural areas.

The above survey attempts to measure current activity in rural areas on the basis of responses about the employment on the date of survey. On the basis of these responses, it was estimated that the number of persons in the working age group, was 2,84,100. According to their activity status, they are distributed as follows, in percentage terms.

Table-19

Estimated number of persons in the working age population (15-59 *Years*) *according to current activity, activity status and sex in rural Delhi in* 1977-78

Activity status		Male	Female	Both
1. Self employed		31.3	5.2	19.1
2. Regular salaried		32.4	5.6	18.0
3. Casual labour in public		0.5	0.6	0.5
4. Casual labour in other types of work		4.7	1.6	3.3
A. Employed:	*Total*	68.1	9.0	40.9
5. Seeking work		12.1	0.9	6.9
6. Not seeking but available for work		1.0	0.5	0.7
B. Unemployed :	*Total*	13.1	1.4	7.6

C.	*Labour Force: Total (A-B)*	82.0	10.4	48.5
7.	Students	15.3	6.6	11.3
8.	Engaged in domestic work	0.1	44.5	30.2
9.	Engaged in domestic duties & also free collection etc.	,,	16.9	7.9
10.	Others not in labour force	1.5	1.6	1.5
11.	Casual labour abstained from work due to sickness	1.1	—	0.6
D.	*Out of Labour Force : Total*	18.1	89.6	51.5
	Working age population (15 to 59 years) (C+D)	100.0	100.0	100.0

The labour force accounted for 48.5 per cent of the total working population; 82.916 per cent males and 10.4 per cent females. These data indicate the incidence of unemployment clearly. Unemployed persons, bulk of whom were actively seeking work, formed nearly 16 per cent of the labour force. The position was similar for both the sexes. 14 per cent of the female and 16 per cent of the male labour force did not have any work in hand on the day of inquiry. Among the employed, self employed constituted nearly half of the total; 45 per cent of the males and 58 per cent of the females were self-employed. The proportion of casual workers in employment was 24.4 for females and 7.6 per cent for males. The proportion of casual jobs to salaried jobs was 47.00 per cent for males and 18 per cent for females.

Nearly 90 per cent of the females and 18 per cent of the males were neither employed nor were seeking any employment. 15.3 per cent of the males and 6.6 per cent of the females of working age were students. The female distribution shows preponderance of domestic work. 64.5 per cent of women of working age were engaged in domestic work, while another 16.9 per cent of them combined domestic work with free collection. Together they account for more than 81 per cent of the women in the working age group.

From the survey we get two sets of classification of the employed persons according to industry—one based on the concept of usual activity and the other based on current activity, measured in terms of the engagement in work on the day of the inquiry, or a week preceding the day of the inquiry. The distribution according to the current activity over the week does not differ from that based on the working status on the day of the inquiry. We give below the distribution of workers according to their usual sphere of work and current activity.

Table-20

Distribution of estimated no. of employed persons from the working age group (15 to 59 years) according to industry by usual activity and current activity in rural Delhi in 1977-78 (in per cent)

	Industry Class	Usual Activity	Current Activity
1.	Agriculture	36.4	42.2
2.	Minning & quarrying	—	0.4
3.	Manufacturing & repairs services	8.9	8.8
4.	Electricity, gas and water	2.8	2.9
5.	Construction	1.0	1.5
6.	Wholesale & retail trade, restaurants etc.	2.8	2.9
7.	Transport, storage & communication	7.5	7.6
8.	Financing, insurance real estate	1.4	1.1
9.	Community, social & personal services	39.2	32.6
	Total	100.0	100.0

The marked difference between these two distributions is relative to the position of agriculture vis-a-vis service (1 and 9 areas). The current activity accords greater importance to agriculture mainly at the cost of the services. The trend on the whole is not indicative of shift away from agriculture to secondary activities which characterise the development process. The above conclusion is based on a one year survey conducted during July 1977-June 1978. If, however, we compare 1977-78 distribution with the corresponding distribution of 1971 (census), a slightly different position emerges as shown below:

Table-21

Industry wise distribution of workers in rural Delhi according to 1971 Census and NSS 1977-78

Industry	Census 1971	N.S.S. 1977-78
Agriculture	35.9	42.2
Mining & quarrying	2.7	0.4
Manufacturing	21.3	11.7
Construction	3.2	1.5
Trade & commerce	4.4	4.0
Transport, storage & communication	6.9	7.6
Other services	25.6	32.6
	100.00	100.00

While the differences in the NSS and the definitions comprises comparability, the data collected by them may be used to throw light on the broader shifts within the working force over the period. The result of the comparsions is rather disquieting. It indicates a substantial reduction in the relative importance of the secondary sector in rural economy of Delhi. The share of manufacturing, which also includes public utilities like electricity, gas and water in the working force, had declined over the period from 21.3 to 11.7 per cent. Relative importance of the small construction sector too was reduced. Trade and commerce also show a marginal decline. These sectors taken together with mining and quarrying lost as much as 14 per cent points during this period. Corresponding increase measured 6.3 per cent points for agriculture and 7.7 per cent points for 'other services'. There is no indication whatsoever of the impact of development on the structure of the labour force.

Occupational distribution of male workers as given in 1971 Census is illustrated in the following table to indicate relative importance of different occupations in the rural working force.

Table-22

Occupational distribution (males) in rural areas, 1971

1.	Cultivators,	26,363
2.	Agricultural labour	11,119
3.	Potters, kilnmen etc.	9,119
4.	Administrators & executives	7,599
5.	Clerical workers etc.	6,399
6.	Unskilled labour (non-agrl.)	5,394
7.	Fire fighters, policemen, etc.	3,515
8.	Drawers etc. (road transport)	2,878
9.	Brick-layers & other construction workers	2,750
10.	Mining & quarry workers	2,465
11.	Sweepers, cleaners etc.	2,360
12.	Shopkeepers etc.	2,140
13.	Teachers	1,993
14.	Fitters	1,563
15.	Electrical workers	1,510
16.	Loaders & unloaders	1,238
17.	Sales men, shop assistants	1,116
18.	Tailors	922
19.	Others	12.933
		103,576

As expected, work in agriculture continues to claim greater importance. Cultivators, agricultural labourers and other unskilled labourers together account for nearly 42% of the total workers. Next to them are potters and kilnmen who account for nearly 9 per cent. Administrative and executive functionaries including clerks claim 13 per cent of the total workers force. It is the closeness of the metropolis that explains this large share of administrative, executive and clerical jobs in the rural working force.

The occupational distribution of women in 1971 given in the following table, broadly identifies the type of work, the women are engaged in rural areas:

Table-23

Occupation wise distribution of female workers in 1971

	Occupation	No. of workers	%age
1.	Potters, kilnmen etc.	3,424	43.43
2.	Agricultural labourers	1,440	18.31
3.	Cultivators	657	8.31
4.	Other casual labourers	478	6.11
5.	Sweepers, cleaners etc.	446	5.71
6.	Mining and quarrying workers	374	4.71
7.	Nurses	100	1.31
8.	Teachers	323	4.11
9.		99	1.21
10.	Shopkeepers	79	1.01
11.	Others	464	5.91
	Total	7,884	100.00

Pottery, brick making etc. account for over 43 per cent of the female workers. Rapid expansion in brick making industry in rural Delhi to meet the growing demand of sprawling metropolis has made this possible. Next in importance is the employment in agriculture, where they work much more as agricultural labourers than cultivators; the former account for 10 per cent and the latter for 9 per cent. The rest of the female working force is engaged in unskilled jobs like that of sweepers, cleaners, mining and quarry workers. Teachers and nurses are few in number.

It is notable that rural Delhi forms a part of the Delhi Municipal Corporation and therefore, enjoys the benefits of municipal service. The Master Plan for Delhi which came into force in 1961 provided for the decongestion of the metropolis by shifting non-conforming industries like pottery, tanning, metalware etc. to selected rural areas. There was also a provision for rehabilitating a large number of slum dwellers in 23

selected villages, called 'urban villages.' The implementation of this provision of the Master Plan has, however, been very slow. Only 3 villages namely Madanpur, Bhalaswa and Jahangirpur have so far been absorbed in the urban part of the Territory. The failure, particularly of relocating urban industries into the rural part of the Territory, could be a reason for the continued performance of primary production in the rural working force.

Yet the rural part of the Territory has not remained entirely unaffected by industrialisation. According to the latest survey conducted by the Bureau of Economics & Statistics, Delhi Administration, there were 1,416 processing units employing at least one hired worker in 125 villages in 1977. Their total employment including both owners and hired labourers was 26·325. Of these 1,416 units, 278 were engaged in mining and quarrying, 272 were classified as engineering industries or workshops, 234 produced non-metallic mineral products, 181 were food processing units and 140 were producing rubber, plastic and chemical products. A sizable number of units were producing textile products, while an equally good number was engaged in repairing services.

Important villages where industrial activity has caught up include Nangloi Jat with 159, Pul Pehlad with 47, Badli with 46, Jafarabad with 44, Samaipur with 38, Palam with 34, Rajokri with 33, Sambhalka with 21, Babarpur with 30 and Haiderpur with 29 units.

Apart from the manufacturing units, the survey also listed 1,302 units providing various services as shown below:

Table-24

Non-Manufacturing establishments in rural Delhi in 1977

	Type of establishment	Villages	Units	Employment
1.	Electricity, gas and water	28	36	720
2.	Construction	8	11	290
3	Restaurants & hotels	29	103	358
4.	Transport	26	48	1,519
5.	Storage and warehousing	2	2	13
6.	Communications	57	65	223
7.	Financing, insurance, real estate etc.	48	68	446
8.	Trade (a) Whole sale	4	8	68
	(b) Retail	56	268	914
9.	Community, social & personal services			
	(a) Educational	215	513	6,174
	(b) Medical	54	98	725
	(c) Recreational	1	1	172
	(d) Personal	2	2	6
	(e) Others	38	78	1,191
			1,301	12,819

The table illustrates the inroads which the essentially urban services are making in rural Territory. Some of them are related to the strengthening of the rural economic infrastructure such as electrification, communication, transport, storage and warehousing and trade and commerce. Units catering to conspicuous consumption, like restaurants and hotels, are also emerging in the rural areas; most of them are, however, located on major highways passing through the Union Territory. The above data also illustrates the new access of the rural population to community, social and personal services, including education, health and recreation.

For an overall view of the rural economy, the data on rural share in state income would have been useful. But in its absence as an alternative we may consider the sectors of economy essentially rural in character and their relative importance in the aggregate income of the Union Territory. This, in other words involves estimation of the share of agriculture, including forestry, hunting, fishery, poultry keeping, dairying and other activities related to agriculture, in the aggregate state income for the Union Territory as a whole. We have two sets of estimates for 1951-52 and 1955-56 from the studies of the Town Planning Organisation conducted for the preparation of Delhi Master Plan. These could be supplemented with the data from the annual series published by the Bureau of Economic and Statistics, Delhi Administration from 1960-61. The amount of income contributed by agriculture and allied activities and its share in the total income of the Territory is given below:

Table-25

Income from agriculture in the Union Territory of Delhi, 1951-52 to 1977-78

Year	Income	
	Amount (in millions)	%age
1951–52	49.4	4.7
1955–56	50.7	3.5
1960–61	122.3	6.2
1965–66	177.2	5.5
1970–71	331.7	5.9
1975–76	546.7	5.0
1977–78	655.0	5.2

It will be seen that agriculture suffered during the fifties. It picked up by 1960-61 but again suffered a set back in 1970s. The state income from the rural part of the Territory had increased from Rs. 50 million in 1951-52 to Rs. 656 million in 1977-78–a large part of this increase is attributable to price inflation characterising this period. Estimates of state income at constant 1960-61 prices are available from the publications of the Bureau of Economics & Statistics, Delhi Administration. They show that the share of agriculture was progressively reduced from 6.2 per cent in 1960-61

to 4.7 per cent in 1967-68. The subsequent trend brought it down to 4.9 per cent in 1970-71 and to 3.5 per cent in 1977-78.

Planning

Planning for the rural areas of Delhi began with the introduction of the Community Development Programme in October, 1952. Alipur Block was the first in the country where Community Development Programme was launched. Subsequently, extension service was added to Community Development. By the end of Second Plan period, the entire Territory was covered by these programmes. These two inter related programmes of Community Development and agricultural extension virtually exhausted the scope of the planning progress in rural Delhi.

This planning progress has obviously been influenced by the unique position of Delhi as the national capital. In size, the Delhi Territory is smaller than most other districts in the country but the level of its urbanisation is by far the highest barring fully urban districts like Bombay and Calcutta. Consequently, Delhi has attracted greater attention from development planners. It has become indeed a show piece for foreign dignitaries who visit the development Blocks to have an idea of the progress achieved through planning in rural sector.

As a part C state till 1956, Delhi was directly responsible for its planning. Thereafter planning became the responsibility of the Delhi Administration under the overall control of the Central Government. This responsibility is shared with the New Delhi Municipal Committee, the Municipal Corporation of Delhi and Delhi Development Authority.

The allocation of the plan expenditure have varied from one plan to another indicating the relative importance of various sectors of economy in the planning process as shown below:

Table-26

Sectoral distribution of plan expenditure between 1951-79

Sector	Amount (in lakhs)	Per cent
Agriculture and allied programmes	1,719.54	2.56
Flood control, irrigation and power	20,234.68	30.26
Industry and mining	2,511.87	3.74
Transport and communication	6,626.91	9.86
Educational general	10,071.09	14.98
Technical education	682.45	1.01
Community development & cooperation	242.44	0.36
Health and water supply	12,532.55	18.65
Housing and urban development	10,370.84	15.45
Others	2,115.32	3.15
Total	67,207.69	100.00

Agriculture and allied programmes meant exclusively for rural areas account for only 2.6 per cent of the total. Community development which formed a part of these programmes claimed a bare 0.36 per cent of the total in plan expenditure. The programmes of flood control, irrigation and power claim the largest share in aggregate plan expenditure for the Territory; they too are relevant for the development of rural areas. From plan to plan, the actual expenditure under, these three heads has varied as shown below:

Table-27

Expenditure (Rs. in lakhs) on agriculture, community development, irrigation and power under various plans.

	Agriculture and allied programme	Community develop-ment	Irrigation and power
First Plan (1951–56)	77.76	4.48	0.05
Second Plan (1956–61)	38.89	43.68	627.05
Third Plan (1961–66)	95.54	23.38	2833.35
Annual Plan (1966–67)	34.01	2.50	1106.19
,, (1967–68)	49.43	3.29	1033.91
,, (1968–69)	41.01	1.91	859.14
Fourth Plan (1969–74)	243.94	69.48	5074.85
Fifth Plan (1974–78)	811.42	66.03	6937.88
Annual Plan (1978–79)	327.54	27.69	2312.26
Total	1719.54	242.44	20,334.68

In irrigation and power sector, irrigation constitutes a small fraction. Expenditure under the remaining two heads is strictly meant for the rural areas. The expenditure on community development declined in absolute terms during the Third and the three Annual Plans. While relating the actual expenditure under these two heads to the total expenditure for each plan in Delhi, it is revealed that the expenditure on agriculture and allied programmes constituted 16.5 per cent of the total in the First Plan. It declined to 2.5 per cent in the second plan and to just one per cent in the Third Plan, but increased somewhat during the three Annual Plans and the Fourth Plan. Emphasis on agriculture in the development programme was revised during the Fifth Plan when its share increased to 3.3 per cent of the total and further strengthened in the annual plan for 1978-79 where it recorded a share of 37% of the total plan expenditure. Community development lost its importance after the Second Plan; expenditure on it was first reduced to 2.8 per cent, and later to only about 0.3 per cent.

The details of expenditure in the Fifth Plan and the Annual Plan for 1978-79 on programmes primarily concerned with the rural areas are presented in the following table:

Table-28

Actual Plan expenditure (Rs. in lakhs) during 1974-78-*and* 1978-79 *on selected programmes*

		1974-78	1978-79
1.	Manure and fertiliser	88.88	63.88
2.	Horticulture	36.75	8.33
3.	Flood control	850.75	277.26
4.	Plant protection	12.24	2.90
5.	Agriculture marketing and quality control	10.19	7.67
6.	Agricultural engineering	6.23	3.29
7.	Extension & farmers training	4.97	0.82
8.	Multiplication & distribution of seeds	5.41	2.63
9.	Investigation and development of ground water	49.84	13.68
10.	Tube-well	12.76	1.86
11.	Other minor irrigation schemes	84.48	27.29
12.	Soil conservation	40.15	14.70
13.	Cattle development	55.59	13.82
14.	Animal health	13.30	6.78
15.	Dairy development	335.00	135.00
16.	Community development & panchayats	3.75	1.05
17.	Fisheries	34.94	15.48
18.	Rural electrification & tubewells	221.92	64.66
19	Credit cooperatives	37.39	12.87
20.	Ware housing	1.13	—

In the Fifth Plan and the Annual Plan for 1978-79, when more emphasis on agriculture and allied activities was paid, flood control, which formed a part of 'irrigation and power and flood control' sector utilised the largest amount. Next in importance is dairy development, but this programme mainly includes the development of Delhi Milk and Mother Dairy Schemes meant for urban population. Of these, the component of cattle development may be considered as relevant in the development

of rural areas. Rural electrification has also been a priority programme. This is followed by programmes like manures and fertilisers, minor irrigation, development of ground water resources, credit cooperatives, horticulture and fisheries in terms of priority.

The plan achievements in rural sector may be assessed by comparing the 1950-57 position with the position in 1965-66 and in 1977-78.

Table-29

Achievements in physical terms during the plans

		1950–51	1965–66	1977-79
1.	Area under forest (hectares)	18	1415	1434
2.	Area under orchard (hectares)	NA	41	781
3.	Net cropped area (hectares)	90882	80222	69392
4.	Gross cropped area (hectares)	NA	99726	100341
5.	Irrigated area-net (hectares)	31565	33630	52791
6.	Irrigated area-gross (hectares)	NA	38550	54434
7.	Average yield of wheat (Kg. per hectare)	630	1351	2684
8.	Average yield of paddy (Kg. per hectare)	378	424	1633
9.	Average yield of gram (Kg per hectare)	97	510	1077
10.	Average yield of barley (Kg. per hectare)	7	194	1439
11.	Veterinary hospitals & dispensaries	—	31	58
12.	Rural water supply-No. of villages covered	NA	25	234

The performance of agriculture in physical terms has been very good. Despite a loss of 21 thousand hectares of land under cultivation, due to urbanisation, agricultural production has increased at compound rate of 10 per cent per annum over the period 1951-52-1977-78. The yield of wheat per hectare increased from 628 kg in 1951-52 to 1,351 kg in 1965-66, to 1,932 kg in 1971-72 and to 2,684 kg in 1977-78. Other cereals too recorded increase in yield; among them the increase in the case of rice and *bajra* is sizable. The average yield of wheat, paddy, gram and barley increased by two to four times during 1965-66-1977-78.

The impact of planning on rural sector has no doubt been significant. A survey conducted as a part of the Economic Census in 1977 to assess the village amenities has revealed that all the 227 inhabited villages in Delhi are electrified; 212 or 93.4 per cent have primary schools; 212 have metalled link roads; 181 were served by the Delhi Transport Corporation buses, 195 have fair price shops and 184 have cooperative credit societies. The number of villages served by various amenities and services is indicated below:

Table-30

Amenities in Rural Delhi in 1977

	No. of villages	%age of all inhabited villages in the Territory
Bus Stop	181	79.8
Metalled road	213	93.9
Fair price shop	195	35.9
Credit cooperative	184	81.1
Banks	44	19.4
Drinking water tap	34	15.0
Post Office	94	41.4
Primary school	212	93.4
Middle school	47	20.7
Secondary school	51	22.5
Dispensary	67	29.5
Primary health centre	18	7.9
Fertiliser depot	34	15.0
Veterinary dispensary	29	12.8
Seed store	22	9.7
Repair facility of agricultural implements	21	9.2
Markets	12	5.7
Ware house and storage	2	0.9

During the planning period, there has been a great transformation in agriculture. This has been brought about by the use of new agricultural implements and techniques, chemical fertilisers, high yielding varieties of seeds and changed cropping pattern.

The use of chemical fertilisers amounted to 20,211 m. tons or 0.29 m. tons per hectare of new sown area, during 1976-77. Sludge manure, to the extent of 33,549 m. tones, was also consumed during this period. The use of chemical fertilisers increased five times since 1975-76. Of the net area sown, the net irrigated area formed 33 per cent in 1955-56 and 42 per cent in 1965-66 and 75 per cent in 1977-78. The increase in forest area from 18 hectares in 1949-50 to 1,434 hectares in 1977-78 is rather phenomenal.

The use of ordinary ploughs wooden or iron and even improved harrows and cultivators show a declining trend from 1966 to 1977, the years for which data are available. The number of wooden ploughs came down to half over the period. The use of improved seed drills shows an increase of 50 per cent. The use of improved thrashers has gained ground, their number increasing from 240 in 1966 to 2,544 in 1977. Thrashing through traditional means has almost vanished. The use of carts is greatly

reduced, their number decreased from 88,459 in 1966 to 4,384 in 1977. The number of power tillers increased from 2 to 59 and that of oil engines (with pump) for irrigation purpose from 633 to 4,595. On the other hand, the number of Persian wheels decreased from 7,852 in 1966 to 685 in 1977. Tractors have come in greater vogue; their number increased from 66 in 1966 to 1822 in 1977. The tractors are also given on hire now by their owners. Consequently, the number of male cattle above 3 years of age, meant for field work, declined from 27,752 in 1966 to 14,687 in 1977.

The poultry farming too gained in importance. The number of birds rose from 1,29,417 in 1966 to 3,03,529 in 1972 but thereafter the number declined to 2,16,911. The poultry farming is very much influenced by the comparative costs in other states and the price of the poultry products in Delhi markets. Whenever, the cost of poultry products is comparatively low outside the Union Territory due to differential inputs, prices and the subsidies offered by other states, it becomes uneconomical to run poultry farms in Delhi. Consequently, the laying birds are offered as table birds and the number of poultry birds declines.

The growing demand for vegetables in Delhi has encouraged the production of vegetables. The area under vegetables increased from 10 thousand acres in 1965 to over 40 thousand acres in 1970. Obviously, the people in rural Delhi have now switched over to vegetable cultivation which is much more profitable.

The objective and strategy for the development of rural areas of Delhi must take into consideration the limitation of area and its proximity to a big metropolis, which offers it unique opportunities. The city provides the rural area with a vast market for horticulture products, milk, poultry, fish and vegetables. It also provides opportunity of jobs of all descriptions. The Union Territory of Delhi must be planned in the light of these factors.

CHAPTER VII

BANKING, TRADE AND COMMERCE

Rural Indebtedness

An early reference to rural indebtedness in Delhi was made by Major C.H. Beadon in his final settlement report of Delhi District (1906-10). It said "Unsecured debt of the proprietors is returned as 35 lakhs of rupees, a sum which is about 4 times the land revenue demand on the farmers and means a debt of Rs. 40 per individual proprietor".[1] The report does not, however, give any details of the basis of the method on which the estimates were based.

In 1929, the Centrally Administered Area's Banking Enquiry Committee was appointed to investigate into the following issues:

(a) agricultural credit,

(b) working of co-operative banks and co-operative marketing societies,

(c) indigenous banking, and

(d) investment habits and attraction of capital.

The committee was also required to conduct intensive survey of the credit conditions obtaining in agriculture and small scale industries. It carried out a general survey of rural indebtedness in the Delhi province and selected 14 villages for intensive study

The Committee adopted various methods to examine the problem. One of them was based on the statement of 184 agricultural credit co-operative societies on their *haisiyat* estimated at Rs. 2,38,89,840. The Intensive Survey in 14 selected villages estimated Rs. 366 lakhs and Rs. 341 lakhs as gross and net debt respectively. The figures of mortgaged debt and the debt owed to co-operative societies were generally found to be correct. *Patwari's* estimates on open debt were occasionally underestimated, but they gave a more correct view of the overall situation.

In Delhi, the enquiry embraced 24,341 families in 295 villages. Of these, 23,696 families were of land owners and tenants, 279 of non-agriculturist *mahajans* and 266 of landless labourers and artisans. Of them 11,916 families were absolutely free from debt, another 756 had lent more than they had borrowed, and 5 had borrowed and lent equal amounts. Thus 52.08 per cent of the families were really free from

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1. Quoted in *Report of the Banking Enquiry Committee for Centrally Administered Areas*, Vol. I Calcutta, Central Publication Branch, 1980, p 30.

debt. The extent of indebtedness among the different categories of families was as follows:

Table—1

Extent of Indebtedness in Rural Delhi
(Extensive survey)

Categories	Number of families	Families in debt	Percentage of families really in debt
1. Landowners and tenants	23,966	11,503	48.5
2. Non-agriculturist *mahajans*	279	24	8.9
3. Landless labourers and artisans	366	137	37.4
Total	24,341	11,664	47.9

The table reveals the lowest incidence of indebtedness among the non-agriculturist *Mahajans*. Even landless labourers and artisans recorded lower incidence of indebtedness as compared to landowners and tenant cultivators.

The gross debt for 12,425 indebted families, including those who had lent more or at least equal in amount to what they had borrowed, was Rs. 1,00,48,207, which gives an average of Rs. 809 per family. If 761 families, who had lent either as much or more than they had borrowed are excluded, the net debt of the remaining 11,664 indebted families comes to Rs. 96,77,844 giving an average of Rs. 864 per family. The survey revealed that out of the net debt of Rs. 95,73,304 , the mortgaged debt among the land owners and tenants amounted to Rs. 42,41,854.

The intensive enquiry covered 759 families in 14 villages—673 agriculturist proprietors and tenants, 72 landless labourers and artisans and 14 *mahajans*. The result of the survey indicated an estimated 366 lakhs of gross debt and 341 lakhs of net debt. Interestingly, 84 per cent (637 out of 759) families in the 14 selected villages were found indebted as compared to 47.9. per cent revealed by extensive survey.

Obviously, families in the selected villages covered by intensive survey were far more heavily indebted. In 3 out of the 14 selected villages, not even one family was free from debt.

The gross debt of 759 sample families amounted to Rs. 6,50,325 giving an average of Rs. 857 per family. But leaving aside the families whose borrowings and lendings were even or whose lendings were more than borrowings, the gross debt for 637 really indented families amounts to Rs. 6,04,929 which works out to Rs. 950/ per family.

The gross debt per family of proprietors and cultivators in the 14 villages was Rs. 909 and the net debt was Rs. 885. The average debt per family of the cultivators, owning and cultivating below 10 acres of land, came to Rs. 764, while for those owning or cultivating more than 10 acres, the average was as high as Rs. 1535.

The Enquiry investigated the purpose and duration of loan in respect of various categories. 97.7% of the gross debt, amounting to Rs. 6,50,325, was contracted for different purposes as shown in the following table:

Table—2

Purpose of Loan

Purpose	Time Period						Total	
	Short term amount		Intermediate term amount		Long term amount			
	Rs.	%	Rs.	%	Rs.	%	Rs.	%
A. Productive	1,79,909	(28)	38,303	(6)	41,207	(6.4)	2,59,429	(40.0)
1. Land	—	—	—	—	15,195	—	15,195	(2.4)
2. Redemption of land	—	—	—	—	16,869	—	16,869	(2.6)
3. Wells	—	—	—	—	9,143	—	9,143	(1.4)
4. Plough cattle	—	—	29,855	—	—	—	29,855	(4.7)
5. Fodder	21,732	—	—	—	—	—	21,732	(3.4)
6. Seed and manure	1,03,623	—	—	—	—	—	1,03,623	(16.1)
7. Agriculture implements	—	—	8,448	—	—	—	8,448	(1.3)
8. Land revenue	6,580	—	—	—	—	—	6,580	(1.0)
9. Miscellaneous	47,974	—	—	—	—	—	47,974	(7.5)
B. Unproductive but necessary	82,953	(12.9)	—	—	1,32,921	(20.7)	2,15,874	(33.6)
10. Old debts	—	—	—	—	1,16,367	—	1,16,367	(18.1)
11. Buildings	—	—	—	—	16,559	—	16,559	(2.6)
12. Maintenance	14,474	—	—	—	—	—	14,474	(2.3)
13. Miscellaneous	68,479	—	—	—	—	—	68,479	(10.7)
C. Unproductive and unnecessary	—	—	1,66,745	(26.0)	—	—	1,66,745	(26.0)
14. Marriage and funeral ceremony	—	—	1,54,746	—	—	—	1,54,746	(24.1)
15. Litigation	—	—	11,999	—	—	—	11,999	(1.9)
Total excl. unclassified)	2,62,862	(40.9)	2,05,048	(31.9)	1,74,128	(27.2)	6,42·038	(100)

Over 40 per cent of the gross debt was incurred for productive purposes, 33 percent for unproductive but necessary purposes and remaining 26 per cent for unnecessary purposes. Of the loans for productive purposes, 70 per cent were for short terms, usually for a few months. The seeds and manure accounted for most of the loans in this category. Long-term productive loans were used for redemption of the mortgaged and purchase of new land. Unproductive but necessary loans were meant for clearing old debts and for meeting the essential requirements. The aggregate of all the short-term loans accounted for nearly 41 per cent of the total debt. The long-term loans of all categories accounted for only 27 per cent of the total debts.

The rate of interest varied depending on the character of borrower, the security given by him and the purpose of borrowing. The general rate of interest for open debts ranged from 12 to 24 per cent per annum.

The Committee arrived at the conclusion that the interest realised on the loaned money was much lower than the stipulated rates. This was corroborated by the Income Tax Department in a note submitted to the Committee.[1] The *Zamindar* (cultivator) witnesses also confirmed that non-agriculturist money-lenders' recoveries had been very small during the preceding 10 years and that a money-lender very often had to accept in lieu of payment the borrowers' cattle at a price higher than the actual market price, as recovery was impossible otherwise. The system of loans in kind prevailed only to a small extent.

The evidence placed before the Committee indicated two types of money lenders-agriculturist and non-agriculturist. Subsequently, *Kabuli* money lender, whose rates of interest varied from 75 to 300 per cent per annum, also entered the field. Then there was the *Rahti System* under which the stipulated rate of interest came to 372% per annum. It was widely prevalent in Mehrauli Block and trans-Yamuna areas. Failure to pay monthly instalment involved panel interest at 1 anna per rupee for each month.

One serious repercussion of rural indebtedness is the increase in the quantum of the mortgaged and sold land. Between 1912-13 and 1928-29 the total mortaged area was 70,074 acres, whole the redeemed area was 43,409 acres. The total mortgaged money was Rs. 66,94,786 while the mortgaged money discharged amounted to Rs. 42,29,146. The Committee arrived at the conclusion that the rise in the price of land had benefitted the indebted agriculturist as they could redeem more land than they had to mortgage during the period of rising prices. Another result of indebtedness was the compulsion to sell the produce to the creditor at a price below the market rate.

As for the source of borrowings, the extensive survey indicated that more than 50 per cent of the borrowed amount was lent by agriculturist money-lenders

1. Report of the Banking Enquiry Committee for Centrally Administered Areas, op cit. p. 190.

and over 41 per cent by *mahajans*. The co-operative societies could provide hardly about 6 per cent and the remaining 2.6 per cent was lent by government agencies. The Committee observed, "that the popularity of *taccavi* loans is undermined by vexatious delays in dealing with applications, the inadequacy of the amount sanctioned, the structures in recovery, and the increase in the real cost of these loans to the agriculturists on account of various causes."[1] Thus in spite of the low rates of interest charged by the Government, people preferred to borrow from the village cooperative societies and even *mahajans*. Unfortunately the capacity of co-operative institutions to finance their members was very limited.

Loans for cultivation purpose and for payment of land revenue or purchase of food and fodder during times of scarcity were normally given for one harvest, or say six months, those for purchase of cattle from one to two years and for permanent improvements upto 3 years. Loans for longer periods were available mainly as *taccavi* loans under the Land Improvement Loans Act. The private loans were rarely available on long-term basis.

Village Money-Lenders

Money lending in the villages of Delhi was not restricted to a few individuals or communities. Agriculturists as well as non-agriculturists were involved in this business. The *mahajans* constituted 15.3 per cent of the total money-lending families in rural Delhi. The others engaged in money-lending on a significant scale were Banias, Khatris, Jats, Gujars and Muslims.

The term *mahajan* is generally applied to those non-agriculturist money-lenders who have been lending money for several generations. But lending alone was not his business. He sold cloth, grocery etc., bought the village produce for sale outside and occasionally did some farming as well. Capital for his business came partly from his own savings and partly from borrowings from the city money-lenders.

Bania occupied the second place among the village money-lenders in rural Delhi. The agriculturist generally preferred a *bania* to government in spite of the fact that his rate of interest was higher because he lent on all sorts of securities. All transactions were entered in the *bahis*. The small-money-lenders usually maintained a scrap note-book in which they noted details of the transaction. The big money-lenders maintained both a *roznamacha* (daily account book) and a *khata* (ledger).

The Committee observed a tendency among the money-lenders to shift their business to the city. The village money-lender is generally accused of many vices. The Banking Enquiry Committee found most of the charges such as high rate of interest, manipulation of accounts and exploitation, levelled against the *bania* as

1. Report, *op cit*, p 384

unfounded.[1] The money-lenders felt that Land Alienation Act deprived them of the security for realizing their money.

By 1930, the agriculturists had become the principal money lenders in the villages of Delhi because the Land Alienation Act did not apply to them. Expected to be the protectors of the peasant proprietors they turned to be the exploiters of the poor cultivators.

Two other classes of itinerant money-lenders had emerged by 1930 in Delhi. The first group lent money on the *rahti* system, i.e., the lender advancing Rs. 10 or its multiples repayable in 12 monthly equal instalments, the first instalment being in some cases deducted at the time of advancing the loan. The second group was formed by *Kabuli* money-lenders. Initially, this system was confined to city only but gradually it spread to villages. They charged a very high rate of interest ranging from 1 to 3 annas per rupee per month. Their methods of recovery were coercive and they seldom resorted to law courts to realize their money.

Further investigations into the rural indebtedness were made by the Reserve Bank of India in 1950-51, 1960-61 and 1971-72, by Labour Bureau of the Ministry of Labour, Government of India in 1950-51, 1956-57, 1964-65 and 1974-75 and by Census Commissioner's Office in 1961. The Reserve Bank of India Survey of 1971-72 was conducted in collaboration with the National Sample Survey Organisation of the Government of India and the State Statistical Bureau as a part of the 26 round of National Sample Survey. This provided detailed data about indebtedness, assets and liabilities in rural Delhi. Of the four Labour Bureau surveys, the two conducted during 1964-65 and 1974-75 provide separate data for rural Delhi on labour households and agricultural labour households. The 1961 survey by the Census covered all the rural households. It corresponds to the Reserve Bank of India Survey of 1971-72 in coverage. The Reserve Bank of India Survey categorised the rural households as cultivators, agricultural labourers, artisans and non-cultivators.

For understanding the overall position, a reference to the Census survey of ten villages of Delhi Territory in 1961 is useful. According to this survey 683 of the 1048 households (about 65 per cent) were in debt for an aggregate amount of Rs. 1,18,733. The average amount of debt per household was thus Rs. 1,068 and per indebted household Rs. 1,368. The Reserve Bank of India Survey of 1971-72 found less than 30 per cent of the households under debt as compared to 65 per cent in 1961. The average debt for rural household was Rs. 654 in 1971 but for indebted household it was as high as Rs. 2,197. According to these two inquiries the purposes for which the households had contracted the debts, were as follows:

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1. Report, *op. cit.* p. 166

Table—3

Purpose wise Distribution of Aggregate Debt in 1961 *and* 1971

(in per cent)

	Purpose of Debt	1961	1971
1.	Farm business (capital expenditure)	21.3	23.5
2.	Farm business (current expenditure)	10.8	9.6
3.	Non-farm business	6.4	5.1
4.	Household expenditure	15.1	39.4
5	Repayment of loans	0.8	—
6	Expenditure on litigation	0.8	—
7.	Others (including social and religious functions)	34.8	22.4
		100.0	100.0

Non-productive debts which amounted to 51.5 per cent in 1961 increased to 61.8 per cent by 1971. The share of household expenditure in the aggregate debt increased from 15.1 per cent in 1961 to 39.4 per cent in 1971 indicating financial hardship of the poorer section of the rural society. A higher proportion for 'others' in 1961 may be related to the construction of houses. In the non-productive category, the items like repayment of old loans and expenditure on litigation were completely eliminated by 1971. The decline in debts for productive purposes during the decade occurred due to reduction in farm business.

The distribution of the aggregate debt by the lending agencies in rural Delhi in the two surveys is as under:

Table—4

Distribution (in per cent) of Aggregate Debt in 1961 *and* 1971

	Lending Agency	1961	1971
1.	Government	27.1	14.2
2.	Co-operative societies/banks	12.4	10.6
3.	Commercial Bank	—	8.8
4.	Private (Professional) money-lender	28.0	13.1
5.	Agriculturist money-lender	19.7	26.3
6.	Trader	—	10.6
7.	Relatives and friends	12.8	10.0
8.	Others	—	6.4
	Total	100.0	100.0

Institutional credit which had gained some strength by 1961 appears to have lost some ground over the decade. Its share declined from 39.5 per cent in 1961 to 33.6 per cent by 1971. This decline suggests the inability of the government to meet credit needs of rural Delhi. Commercial banks made some contribution in this direction during the decade. Cooperative credit societies, also do not seem to be performing so well as expected of them.

In the non-institutional sector, the role of private professional money-lender has declined considerably and its place has been taken by trader and agriculturist money-lender. Relatives and friends still appear to be the last resort of the rural people to meet their credit requirements.

For a comparative study of indebtedness among the rural labour households in Delhi, the following table based on Rural Labour Enquiries of 1964-65 and 1974-75 may be useful.

Table—5

Indebtedness in Rural Labour Households during 1964-65 *and* 1974-75

		All households		Scheduled Caste Household	
		1964-65	1974-75	1964-65	1974-75
1	2	3	4	5	6
1.	Households under debt (%)	33.7	25.7	46.3	30.8
2.	Av. debt per household (Rs.)	353	305	530	413
3.	Av. debt per indebted household (Rs.)	1048	1,188	1,145	1,342
4.	Nature of loan:				
	(1) Hereditary (%)	6.4	—	7.9	—
	(2) Cash (%)	86.5	97.2	79.0	100.0
	(3) Kind (%)	0.9	2.8	1.0	—
	(4) Cash & Kind	12.6	—	13.3	—
5.	Purpose of loan:				
	(1) Consumption (%)	48.3	36.2	52.2	60.9
	(2) Marriage (%)	32.0	63.8	2.93	39.1
	(3) Others (%)	19.7	—	14.9	—
6.	Source of borrowing:				
	(1) Cooperatives (%)	5.3	21.3	5.8	42.2
	(2) Employers (%)	8.3	—	9.1	—
	(3) Money lenders (%)	15.9	31.8	8.5	57.8
	(4) Shop-keepers (%)	2.3	2.8	2.5	—
	(5) Others (%)	68.2	44.1	74.1	—

It will be seen that the proportion of indebted households declined during the decade 1964-65, 1974-75, both among scheduled castes and non-scheduled castes. The incidence of indebtedness is still high among the scheduled caste households but the gap between them and non-scheduled caste households has considerably narrowed down. The reduction in the proportion of indebtedness among rural labour households has been accompanied with a reduced burden of debt in general when all households are considered but the average debt per indebted household increased for both the scheduled caste and rural labour households. But the increase in the burden of indebtedness on scheduled caste households is far greater than on non-scheduled caste households.

Among the loan types, loan in kind has almost disappeared during the period. The hereditary loans accounting for 6.4 per cent in 1960-65. have also been cleared up. Now the main reasons for incurring debts are marriage and consumption needs. The proportion of loans for marriage was higher in 1974-75 than in 1964-65.

Among the lending agencies, the employers contributed in the form of advances to employees adjustable against their salaries. Such advances constituting 8.3 per cent of the debts in 1964-65 for all households, were not in existence in 1974-75. The borrowings from relatives and friends categories as 'others', accounted for 68.2 per cent among all rural labour households and 74.1 per cent among scheduled caste households in 1964-65. The share of cooperative societies and banks was 21.3 per cent in 1974-75 as compared to 5.3 per cent in 1964-65 among all households. The private money-lenders continued to be an important source of borrowing; their share in the total aggregate debt among the scheduled caste households was higher than that of the cooperative sector. When we consider all households, the category of 'others' continued to be the most important source even in 1974-75, but it was far reduced in importance as compared to 1964-65.

The detailed Reserve Bank survey on cash dues against rural households as on 30th June, 1971 indicates 56.2 per cent from cultivating households and 43.8 per cent from non-cultivating households. In the later category, artisan households constituted 15.4 per cent and agricultural labour households 4.4 per cent of the total. This investigation revealed that the incidence of outstanding dues was highest (39 per cent) among the artisans and the lowest (23.8 per cent) among the agricultural labour households. The average debt for all rural households was Rs. 654, while the average for indebted households was Rs. 2, 197. The average at the lowest was 1,189 for agricultural labour households and at the highest Rs. 2,968 for cultivating households.

Among the lenders, the institutional sources accounted for 33.6 per cent, agriculturist money lenders for 19.5 per cent, professional money lenders for 13.1 per cent, traders for 10.6 per cent, friends and relatives for 10.0 per cent, landlords for 6.8 per cent and others for 6.4 per cent of the total debts. Institutional credit was available to

the cultivators in a large measure and, therefore, 42.9 per cent of their dues came from this source. Among the non-cultivating households, the agricultural labour banked on government whereas artisans on cooperative societies. For the cultivator, agriculturist money-lender and trader, for the agricultural labour, the agriculturist money lender and for artisans, professional moneylenders were the second best source of credit.

Cultivators and artisans respectively used 57 per cent and 33 per cent of loans for productive purposes. The agricultural labourer contracted half of the debts for consumption and half for social needs. The debts amounting to 66 per cent among other non-cultivators, 44 per cent among artisans and 25 per cent among cultivators were contracted for domestic needs. The category of 'others' was insignificant for the cultivators, significant for artisans and important for other non-cultivators.

Personal security was offered for 40 per cent of the debts. Personal security was important in the case of non-cultivating households. Almost half of the loans taken by agricultural labour and other non-cultivators were transacted without any security. The unsecured loans accounted for 18 and 23 per cent of the total for the cultivators and the artisans respectively. These two groups could offer the first charge on immovable property to the extent of 35 per cent and 34 per cent respectively.

The lowest rate of interest appears to have been paid by 'other non-cultivators'. In their case, over 32 per cent of the loans were given at rates lower than 12½ per cent per annum. The interest on these was 16.6. per cent for cultivators, 11.7 per cent for agricultural labour and 5.4 per cent for artisans. The highest rate of interest of over 37½ per cent per annum was charged on 63 per cent of the loans for artisans, 44 per cent of the loans for cultivators and 41 per cent of the loans for other non-cultivators. Thus, the highest rate of interest was paid by artisans, followed by agricultural labour.

The short term loans of less than a year's duration account for two thirds of the loans of agricultural labour and artisans. For non-cultivators and cultivators it accounts for half and one-fourth of the total respectively. The share of the medium term loans, extending from one to three years, is 20 per cent for artisans, 33 per cent for agricultural labour and other non-cultivators and 37 per cent for cultivators. Long term loans for 3 years or more amounted over 25 per cent of all the loans of the cultivators. The agricultural labour did not get any long-term loans.

Legislative Measures: Realising the plight of the rural poor owing to chronic indebtedness, the government adopted several legislative measures to protect them from the money lenders. These included the following:

1. The Indian Usurions Loans Act of 1981, which was extended to the Union Territory provides that in case the law court has reasons to believe that the transactions entered between the parties was substantially unfair and the interest was excessive, it can (i) reopen the transaction (ii) look into the matter with the parties (iii) relieve

the debtor of all liability in respect of any excessive interest, not withstanding any agreement purporting to their previous dealing and (iv) order the creditor to repay the sum which it considers to be repayable to the debtor or to indemnify the debtor in such manner and to such an extent as it may deem just, provided that it shall not reopen any agreement purporting to close previous dealings which have been entered into by the parties concerned on a date more than six years from the date of the order.

2. Under the Insolvency Act, the agriculturist is protected against the execution of unjust debts notwithstanding his ability to pay.

3. The Punjab Land Alienation Act disallows permanent alienation of land without prior sanction of the Collector unless the Alienee is a member of the same caste or tribe or unless he belongs to one of the agriculturists castes or tribes in the province.

The Government also established cooperative institutions to help the rural poor. It advances *taccavi* loans at nominal rates of interest to help the farmer during natural calamities. The Government also extends credit and subsidy facilities to encourage and promote developmental programmes in rural areas under the Five Year Plans. Earlier the Government used to advance big loans for various development purposes in the rural areas directly but now the loans are mostly extended through commercial banks and cooperative institutions. It also allows some subsidy on these loans. Government's effort in the field of developmental planning is supplemented by the state-owned agricultural Finance Corporation and Agricultural Re-finance Corporation. The credit offered by these corporations is disbursed in rural areas through the Delhi State Cooperative Bank.

Nationalisation of Banks: In 1969 the Government nationalised fourteen major banks to make them useful for vulnerable sections of the society, including the rural poor. These fourteen banks included Allahabad Bank, Bank of Baroda, Bank of India, Dena Bank, Indian Bank, Indian Overseas Bank, Punjab National Bank, Syndicate Bank, Union Bank of India, United Bank of India and United Commercial Bank. The Government directed these banks to promote banking habits in rural areas.

Indigenous Banking: The indigenous banker is different from the private money-lender in the sense that the former receives deposits and deals with other people's money whereas the later deals with his own money. But the indigenous bankers have seldom taken any interest in rural areas and their activities mostly remained confined to major cities.

Modern Banking: Delhi has witnessed great expansion of modern banking system in the present century. But in the rural areas banking activity was limited to acceptance of deposits because the investment there was considered less productive and unsafe. Nationalisation of banks in 1969 opened up banking facilities in rural areas. In the

beginning the progress was slow and by 1976, only 2 bank offices had started operating in rural Delhi. Their number increased to 29 in 1977 and 49 in 1980. In 1976, the commercial banks received deposits worth Rs. 5 lakhs but made no advances. In 1977, the deposits increased to Rs. 102 lakhs and the advances to Rs. 599 lakhs. By the end of 1980, commercial banks with forty-two branches and three extension counters had been established. The United Commercial Bank started participating in the implementation of the credit plan scheme from its branch at New Subzi Mandi in urban Delhi. Subsequently 11 branches of the nationalised banks, located adjacent to rural areas, also started financing the credit plan scheme in rural Delhi. The Delhi State Co-operative Bank also established, one branch in each block, to extend banking and credit facilities to rural Delhi.

Lead Bank: The Gadgil study group of the National Credit Council, formed in 1969, recommended the Lead Bank Scheme for the development of rural and backward areas. Under this scheme, all the districts and Union Territories were allotted to a particular bank called the Lead Bank. The Lead Bank was assigned the responsibility of identifying the credit needs, the banking requirements and the bankable schemes in the district for promoting all round development.

The Lead Bank Officer supervises the effective implementation of the credit plans of the district. His duties include:-

(i) preparation of bankable scheme, in the field of agriculture, industry, trade, transport etc. for the district;

(ii) Preparation of credit plan and the annual action plan by all the financial institutions operating in the district;

(iii) monitoring the implementation of credit plan by all financial institutions operating in the district;

(iv) collection of date under the Lead Bank Scheme;

(v) coordination of banking activity in the district;

(vi) apprising the district officials of the problems faced by the bankers in making advances; and

(vii) convening of district consultative committee and its standing committee.

The District Consultative Committee, presided over by the Deputy Commissioner, which meets quarterly, ensures the coordination between the bankers and the concerned Government agencies. The Standing Committee or the Export Committee meets every month and discusses all issues relating to the formulation and implementation of the district plan.

The credit plan is worked out Blockwise for each sector keeping in view the local conditions. This helps the Branch Manager to understand the credit requirements of

the area of his operation. These plans have to take into consideration the targets fixed by the government for financing by the bankers. In the first phase of the scheme, a five year credit plan (1974-79) was prepared by each Lead Bank for its districts. For the implementation of the credit plan, annual plans were prepared and their performance reviewed quarterly.

The Lead Bank Scheme was put in operation in rural Delhi in August 1978 with State Bank of India as the Lead Bank. The first credit plan for rural Delhi was formulated in 1979.

The review of the Lead Bank activities in rural Delhi is limited to its working in the first half of 1979. The financial institutions responsible for implementing the credit plan for 1979 had achieved 34 per cent of the target by the middle of the year. The performance varied from sector to sector-99 percent for industry, 39 per cent for services and 29 per cent for agriculture. Scheme wise, it was hundred per cent for poultry, 71 per cent for buffaloes, 66 per cent for tractors, 3.8 per cent for crop loans and 23 per cent for tubewells. In the industrial sector 85 per cent of the financial assistance was allotted to those industries which were not included among the bankable schemes. The allotment for manufacturing aluminium utensils, exceeded the commitment. It appears that enterpreneurs from urban Delhi set up units in rural Delhi to avail of the liberal financial assistance.

Almost 99 per cent of the allocations in the service sector were meant for financing transport vehicles. Of these only 23 per cent were utilized in the first six months and the rest went to the non-listed schemes. Most of the schemes in the sectors like repair workshops, cloth bags and shoe repairs, in the industrial sectors like poultry feed manufacturing, clay and edible oil extraction could not attract the enterprising persons, who preferred the schemes other than those provided in the credit plan schemes.

Under the Lead Bank Scheme as many as 2,994 credit requests (2,194 agriculture, 116 industries and 684 service sector) were met during the first six months. In the beginning, some smaller banks could not function effectively for lack of previous experience. The Delhi State Cooperative Bank could not meet its commitments owing to overdues and poor staff position. In the field of animal husbandry, lack of cross-breed cows and pigs was the main obstacle in implementing the scheme. In spite of the fact that the lending under the credit plan scheme has been considerably simplified, the awareness of these schemes among the rural people is still limited.

The Lead Bank in Delhi prepared for rural areas the Credit Plan for 1980-82 and Annual Plans for 1980 and 1981. The three year plan included most of the continuing schemes, but the detailed economics of the schemes was later revised in view of

the changing prices. It prepared detailed estimates for the following 26 bankable schemes:

1. Tubewell
2. Bullockcart
3. 5-buffalo commercial dairy farm
4. Rearing cross bred heifer
5. 1-hectare fish farm
6. 2000-bird-broiler farm
7. Shoe-making unit
8. Carpentary and blacksmithy unit
9. An edible oil-expeller-cum-flour mill
10. Clay extraction unit
11. Truck
12. Auto-repair-cum motor rewinding workshop
13. Small eating place (dhaba)
14. Tractor
15. 2-Buffalo dairy unit
16. Cross bred cow dairy unit
17. Unit for fatterning 10 weaners
18. 1000-layer bird pou try farm
19. Handloom unit
20. Soap manufacturing unit
21. Poultry feed unit
22. Unit for manufacturing anodised aluminium utensils
23. Stone-crusher
24. Pick-up van
25. Tailoring unit
26. Retail shop.

The Plan also indicates the likely impact of each of the schemes on employment and annual income.

In terms of financial allocation the Credit Plan (1980–82) was modest and its average annual allocation was less than that of the Annual Plan for 1979. The annual allocation for agriculture under 1980–82 Plan was Rs. 241.5 lakhs as compared to 403.6 lakhs for 1979. The allocation Rs. 101.6 lakhs for services sector too was small when compared to Rs. 148.8 lakhs during 1979.

The allocation for industries was however, increased from Rs. 18.62 lakhs in 1979 to Rs. 214.20 lakhs in 1980-82, providing for an annual allocation of Rs. 71.4 lakhs. In spite of a reduced share for agriculture, average annual allocation for tubewells, tractors buffalo units and poultry was higher in 1980–82 Plan as compared to 1979 Plan. The allocation for crop insurance came down from Rs. 283.1 in 1979 to Rs. 57.1 lakhs in 1980. In the industrial sector, the category of 'others' accounted for Rs. 56.8 lakhs in a total outlay of Rs. 71.4 lakhs. All other schemes received small allocation in the Three Year Plan. In the service sector, additional provision was made for retail shops, eating places, tea stalls, tailoring units etc. in 1980–82 Credit Plan. During the Plan the annual allocation for transport schemes was reduced from Rs. 147 lakhs in 1979 to Rs. 57.8 lakhs.

Under the Lead Bank Scheme, each one of the 228 villages of Delhi has been adopted by one of the fourteen commercial banks. The following 57 branches of these banks served the villages in 1980.

Table—6

List of Commercial Banks and the Number of Villages Adopted by each of its Branches in 1980

S.No.	Name of Bank	Name of Branches	No. of villages adopted
1	2	3	4
1.	State Bank of India	(i) Najafgarh Agricultural Development Branch	31
		(ii) Mehrauli	5
		(iii) Badarpur	4
		(iv) Nangal Dairy	3
		(v) Kanjhawala	14
		(vi) Badli	5
			62
2.	Syndicate Bank	(i) Bawana	8
		(ii) Palam	6
		(iii) Fatehpur Beri	6
		(iv) Bijwasan	5
		(v) Chhatarpur	4
		(vi) Nangloi	4
		(vii) Haiderpur	1
			34
3.	Allahabad Bank	(i) Dhansa	9
		(ii) Alipur	10
		(iii) Mangolpur Kalan	4
		(iv) Nawada	3
		(v) Tughlakabad	1
		(vi) Rajokari	1
		(vii) Budhela	1
		(viii) Bindapur	1
			30

1	2	3	4
4.	Punjab National Bank	(i) Najafgarh	6
		(ii) Mall Road	5
		(iii) Azadpur	1
		(vi) Shakurbasti	2
		(v) Punjabi Bagh	3
		(vi) Chiragh Delhi	1
		(vii) Khichripur	3
		(viii) Patparganj	3
		(ix) Khanpur	2
		(x) Mehrauli	2
			28
5.	Bank of India	(i) Shahdara	10
		(ii) Bakhtawarpur	11
		(iii) Narela	2
			23
6.	Central Bank of India	(i) Madipur	7
		(ii) Janakpuri	4
		(iii) Lado Sarai	3
		(iv) Nangal Dewat	1
		(v) Patparganj	2
		(vi) Shahbad Mohammadpur	1
		(vii) New Subzi Mandi	2
			20
7.	Union Bank of India	(i) Shahdara	3
		(ii) Holambi Khurd	4
		(iii) Mukhmelpur	3
		(iv) Bankner	3
		(v) Sambhalka	1
		(vi) Mangolpur Khurd	1
			15

1	2	3	4
8.	United Commercial Bank	(i) New Subzimandi	4
9.	Bank of Baroda	(i) Mandauli	1
10.	Dena Bank	(i) Chhatarpur	1
11.	Punjab and Sind Bank	(i) Najafgarh	3
		(ii) Garhi Piran	1
			4
12.	New Bank of India	(i) Nangloi	1
		(ii) Paprawat	1
			2
13.	Vijaya Bank	(i) Bhorgarh	2
14.	Traders' Bank Ltd.	(i) Sultanpur Majra	1
		(ii) Naharpur	1
			2

The Lead Bank Officer recommended 11 new branches of Commercial Banks at Karawal Nagar, Sultanpur, Ujwa, Qutabgarh, Mundaka, Tikri Kalan, Pooth Kalan. Palla, Burari, Singhola and Pahladpur Bangar for better service on the basis of the studies made by the Lead Bank.

The following table gives the details of the Delhi (Rural) Credit Plan for 1980-82 as prepared by the State Bank of India, the Lead Bank for rural Delhi.

Table—7

Sector/Scheme	No. of Units	Credit/outlay working capital	(Rs. in lakhs) Term loan	Total
1	2	3	4	5
I, Agriculture & Allied				
(i) Crop loans	—	171.24	—	171.24
(ii) Tube-wells	560	—	42.03	42.03
(iii) Tractors	339	—	162.74	162.74
(iv) Bullock carts	238	—	7.09	7.09
(v) Dairying				
(a) 2-Buffalo units	4447	—	204.61	204.61
(b) 5-Buffalo units	248	—	29.05	29.05
(c) Cross-breed cows	189	—	5.86	5.86
(d) Cross-breed heifers	112	—	1.35	1.35
(vi) Piggery	247	4.34	2.37	6.71
(vii) Fishery	19	—	1.42	1.42
(viii) Poultry				
(a) Layers	144	—	67.69	67.69
(b) Broilers	80	—	24.74	24.74
Sub-Total		175.58	548.95	724.53

1	2	3	4	5
II. Industries				
A. Village Industries				
(i) Handlooms	105	—	4.14	4.14
(ii) Shoe-making	176	—	1.76	1.76
(iii) Soap	42	1.32	0.91	2.23
(iv) Carpentry/Blacksmithy	58	0.90	1.76	2.66
B. Small Scale Industries				
(i) Poultry-feed	9	10.85	4.18	15.03
(ii) Oil extraction	20	3.40	3.00	6.40
(iii) Aluminium utensils	5	0.92	0.88	1.80
(iv) Clay extraction	5	0.25	0.83	1.08
(v) Stone crusher	6	1.88	6.85	8.73
C. Others	—	—	170.37	170.37
Sub Total		19.52	194.68	214.20
III. Services				
(i) Trackters	61	—	73.20	73 20
(ii) Pick-up vans	223	—	100.35	100.35
(iii) Repair workshops	28	0.90	1.06	1.96
(iv) Tailoring units	189	—	2.86	2.86
(v) Dhabas/Tea Stalls	117	—	6.46	6.46
(vi) Retails Shops	500	—	17.52	17.52
(vii) Others	—	—	102.57	102.57
Sub Total		0.90	304 02	304.92
Grand Total	—	196.00	1047.65	1243.65

Surprisingly, the allocations in the Credit Plan for 1980-82 do not make provision for working capital requirements for several schemes such as poultry, piggery, dairying, cross-breed cows, cross-breed heifers, handloom industry, shoe-making, other industries retail shops, dhabas etc. It may be pointed out that the lowest cost for each scheme of village industries is Rs. 2,832, for agriculture Rs. 10,000 and for service sector, Rs. 18,000. Each small scale industry on an average involves over Rs. 73,000.

Co-operative Credit Movement

The movement started in the Delhi Province in 1919-20, but it gained momentum only in 1921 with the establishment of Delhi Province Central Co-operative Bank. By 1929-30, when Banking Enquiry was started it had covered 2/3rd of the rural

area of the Province. The working capital of the Bank was much more than the requirement of the co-operative societies in the province so much so that in 1923 it asked special permission of the Registrar of Co-operative Societies to lend to societies outside the province. During 1924-27, more than 1/3rd of the investment of the Bank was in forms other than loans to the Delhi co-operative societies. In 1928, 39.5% of the total investment of the Bank was outside Delhi Cooperative Movement. The percentage of extra-territorial investment declined in 1929, but still it remained as high as Rs. 9,76,009 as against Rs. 3,88,439 in other investments.

The liquid resources of the Central Co-operative Bank, Delhi were also in excess of the need. In 1927, its liabilities amounted to Rs. 11,26,264 against which the Bank had Government Promissory Notes worth Rs. 2,98,000, cash balances worth Rs. 7,859 and Government Securities worth Rs. 2,31,865.

The analysis of the working capital of primary credit societies of Delhi Province shows that Agricultural Co-operative Credit Societies mainly depended on Central Bank for their finances. In 1928-29, this dependence was 73.8 per cent of the total working capital. The deposits from members and non-members formed 0.3 per cent, and 4.0 per cent of the working capital respectively. In 1928-29, for non-agricultural co-operative credit primary societies, the working capital financed by the loans from Central Bank was 41.6 per cent whereas the deposits from members amounted to 31.3 per cent only.

The advances of the agricultural credit societies have covered productive as well as unproductive purposes. The following table reveals the position in 1928-29 :

Table-8

Purposes and Duration for which Loans were Advanced by Co-operative Societies, 1928-29

	Short Term	Intermediate	Long term	Total	Per cent
1	2	3	4	5	6
I. **Productive**	14,562 (59.3)	8,399 (34.2)	1,612 (66)	24,573	79.7
1. Fodder	6,906	—	—	6,906	22.4
2. Seed	4,991	—	—	4,991	16.2
3. Rent	360	—	—	360	1.2
4. Land Revenue	1,273	—	—	1,273	4.1
5. Agricultural expenses	755	—	—	755	2.5
6. Wells	—	—	312	312	1.0
7. Land purchases	—	—	900	900	2.9
8. Redemption of land	—	—	100	100	0.3
9. Mortgage of land	—	—	300	300	1.0
10. Cattle	—	6,994	—	6,994	22.7
11. Implements	—	1,305	—	1,305	4.2
12. Trade	277	—	—	277	0.9

1	2	3	4	5	6
II. Unproductive but necessary	*1,930 (41.1)	—	2,760 (58.8)	4,690	15.3
1. Repayment of debt	—	—	1,790	1,790	5.8
2. Buildings	—	—	920	920	3.0
3. Foodgrains	1,660	—	—	1,660	5.4
4. Household expenses	170	—	—	170	0.6
5. Sickness	100	—	—	100	0.3
6. Education	—	—	50	50	0.2
III. Unproductive but partly necessary	—	1,520	—	1,520	4.9
1. Marriage and death ceremonies	—	1,520	—	1,520	4.9
Total	16,492 (53.6)	9,919 (32.2)	4,372 (14.2)	30,783	100.0

A persual of the table reveals that 80 per cent of the loans during 1928-29 were given for productive purposes. Of these fodder, seed, cattle and implements added to 65.5 per cent. In the unproductive but necessary group, repayment of old debts and loans for foodgrains account for 11.2 per cent out of a total of 15.2 per cent. Unproductive and unnecessary loans were taken for marriages and death ceremonics.

Of the total loans advanced during 1928-29, 53.6 per cent were for short term, 32.2 for intermediate term and 14.2 for long term. The duration-wise distribution of loans for productive purposes reveals that 59.3, 34.2 and 6.6 per cent were contracted for short, intermediate and long periods respectively. Thus during 1928-29, loans from the cooperative sector were taken mostly for productive purposes and for short durations.

The Committee's Report revealed that the cooperative movement in Delhi province was predominantly rural. But it had touched only a fraction of the rural population. Analysis of families in selected villages revealed that land owners predominated in the membership of the cooperative societies whereas the labourers were hardly represented. The Survey of 14 selected villages showed that co-operative movement financed only 6.1 per cent of the total loans in villages. An enquiry by the Inspector of Co-operative Societies revealed that in no society all the members were free from the *Sahukar's* debt. In one society not a single member was found free from debt. Analysis of the intensive survey carried in 9 villages of Delhi pointed

out that only 2.9 per cent of the members of co-operative societies were free from outside debt.

The Committee's Report further pointed out that 'Not only is an overwhelming majority of members of co-operative societies indebted to creditors other than their societies, but also the bulk of debt they own is due to these outside creditors'.[1] It also reported that the share of co-operative institutions in financing their members was as low as 12.8 per cent of their total indebtedness. The *haisiyat* statement of the cooperative societies for that period, however, puts their share at 26.7 per cent.

The deposits for the co-operative banks came mainly from the local bodies. In 1928-29, their share amounted to Rs. 3,64,000 out of a total of Rs. 11,21,451, thus representing 32.5 per cent of the total deposits. The deposits from members in the Delhi State Central Co-operative Bank during 1928-29 amounted to only 5.2 per cent of the total. The Committee, therefore, came to the conclusion that, 'on the whole, the funds in the movement represent urban rather than rural savings and the deposit side of the activities of rural societies has a heavy leeway to make up.'[2] In the field of thrift no progress was noticed by the Committee.

Regarding advances, credit limits, overdues, etc., the Report points out that the loans advanced by the Central Bank had exceeded the maximum credit limit fixed by the Registrar, in some years. In some societies, no recoveries had been made in 1928-29 and the amount realised from the societies under liquidation was generally disappointing. On 20th February 1927, out of 240 agricultural societies, 7 were under liquidation, 196 showed overdues of interest and 37 were free from overdues. On 27 February, 1929, out of 27 non-agricultural societies, 8 showed overdues. It also pointed out that the actual situation could be much worse.

A more recent Survey of the co-operative credit structure has been attempted in a paper presented to the Third Delhi Co-operative Congress held on November 14, 1980 in New Delhi[3].

In Delhi, the co-operative agricultural credit societies function under a two tier system—Delhi State Co-operative Bank at the apex level and the primary agricultural co-operative credit societies at the village level. The Bank functions through 12 branches. On 30th June 1980 its membership comprised, 1,654 co-operative societies. The Bank is managed by a board elected for a period of 6 years. The following table highlights the working of the Co-operative Bank during 1969-70:-

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1. Report, *op. cit.* p. 210.
2. *Ibid.* p. 213.
3. Background paper on Agriculatural Co-operative in the Union Territory of Delhi : Present Positions, Problems and Prospects.

Table—9

Working of Delhi State Cooperative Bank
(Amount in lakhs)

S.No. Particulars		1969-70	1972-73	1975-76	1978-79
1. Share Capital	Amt.	33.18	45.14	56.64	87.82
	Index	100	136	171	265
2. Deposits	Amt.	327.22	437.82	476.00	828.31
	Index	100	134	165	250
3. Working Capital	Amt.	484.19	622.23	808.03	1257.97
	Index	100	129	167	260
4. Loans and Advances	Amt.	315.23	430.47	435.70	553.68
	Index	100	137	138	176
5. Advances during the year	Amt.	211.05	205.94	130.58	60.91
	Index	100	98	62	29
6. Recoveries during the year	Amt.	160.85	171.64	160.57	68.83
	Index	100	107	100	43
7. Overdues at the end of the year	Amt.	64.53	76.24	156.84	203.63
	Index	100	118	243	316
8. Profits (+) (—) (=)	Amt. Loss	+1.56	+0.47	—13.37	—25.32

Share capital, deposits, and working capital have all made a steady progress during the period under review. The loan operations have, however, declined over the period. The index for annual advances came down to nearly 29 in 1969-70*. This left an overdue amount of Rs. 203.63 lakhs constituting 74.9% of the demand ason 30th June 1979. The paper also pointed out that the accumulated loss of the Bank on 30th June 1979 had gone up to an alarming figure of 99.04 lakhs. The reasons for this poor performance were:-

(1) The principal and the interest, with the societies under liquidation, was not being repaid to the Bank and therefore, the Bank was losing interest of about 8 lakhs.

(2) An amount of Rs. 58.90 lakhs (principal and interest) wasre coverable from the Delhi Co-operative Wholesale Store on 30th June 1979.

(3) Uncertainity had been created among the farmers due to reorganisation of primary agricultural credit cooperative societies and the liquidation of some of the existing agricultural credit societies. This had affected the repayment of loans.

*Owing to thus, loss in 1971-79 amounted to 25.92 lakhs. Although the accumulated loans and advances went up by nearly 75 per cent from 315.23 lakhs to 553.68 lakhs, the quantum of recoveries came down to nearly 43 per cent in 1969-70.

(4) The drought during the preceding years had adversely affected the repaying capacity of the borrowers.

About the working of the Co-operative Bank, the Lead Bank Report[1] says "The Delhi State Co-operative Bank is a weak institution and has heavy overdues....No programme for the rehabilitation of the Bank has yet been drawn up in spite of several rounds of discussions having been held between the Delhi Administration, the Reserve Bank of India and the Government of India. Until the scheme of rehabilitation is drawn up, the State Co-operative Bank is unlikely to get much further assistance from the Reserve Bank."[2]

Primary Cooperative Agricultural Credit Societies

These societies were formed to look after the credit requirements of the farmer. The number of these societies on 30th June 1980 amounted to 174. The following table gives the details of these societies:

Table—10

Cooperative Agricultural Credit Societies in Union Territory of Delhi

Sl. No. Name of Block	As on 30th June 1979			As on 30th June 1980		
	No. of societies	Member-ship	Av. No. of members	No. of societies	Member ship	Av No. of members
1. Alipur	31	4,558	147	38	5,075	134
2. Kanjhawala	45	6,285	140	45	6,306	140
3. Mehrauli	23	2,447	106	24	2,521	106
4. Shahdara	25	3,853	154	26	3,915	151
5. Najafgarh	33	8,762	266	41	9,376	229
6. Total	157	25,905	163	176	27,193	152

(Background paper on Agricultural Co-operatives in the Union Territory of Delhi, presented to third Delhi Co-operative Congress held on November 14, 1980.)

The loan operations of these societies had come down and about 160 societies were under liquidation. The Bank is losing interest on the outstanding loans against these societies. The newly registered 30 societies have not yet started working in the absence of loans from the Bank. The appointment of paid managers for the societies has also not yet been made. In this connection, the observations made in the Lead Bank Plan documents are revealing, "While in terms of numbers, the co-operative movement has made considerable progress over the past few years, the

1. State Bank of India-Credit Plan for Rural Areas of the Union Territory of Delhi-1980-82.
2. *Ibid.*, pp. 20-21.

performance of the societies, in general, has been rather poor, especially with regard to the recovery of overdue loans. A programme of reorganisation of primray agricultural credit societies to form viable units with full time paid secretaries has, therefore, been initiated and 27 such new multi-purpose societies, each with a membership of 51, have already been registered; one each in Shahdara and Mehrauli blocks, 10 in Najafgarh block, 7 in Kanjhawala block and 8 in Alipur Block. The reorganisation programme envisages the establishment in rural Delhi of a total of 40 new societies each catering to the needs of a population of 10,000 or more. There are, in addition, 5 Farmers Service Societies—one in each Block of which the one is in Najafgarh and Nangloi have ceded to Punjab National Bank. The Farmers Service Society at Mehrauli is being managed by Syndicate Bank.[1]

To make long term advances to agriculturists for improvement of land, purchase of tractors, threshers and farm machineries, repayment of old loans, installation of tube wells and pump sets, etc. the Delhi State Cooperative Bank has established a land mortgage section. Such loans are extended for 10 to 15 years duration against mortgage of land.

Trade and Commerce

Delhi has always been an important centre of trade and commerce. The rural Delhi also contributed to it substantially. Till recently, when the *mandies* were established at Rohtak, Sonepat and Bahadurgarh, Delhi was the marketing centre for agricultural products in the region around Delhi.

Barter system and the *Jajmani* system prevailed in rural Delhi upto the beginning of the twentieth century. The traders from the city made purchases of the surplus agricultural products in the village itself. Most of the farmers surrendered their produce to the village money-lender in lieu of the loans borrowed earlier and consequently very few farmers brought their products to the *mandi* at Delhi.

The villagers bought most of the items of consumption like salt, pickles, condiments, kerosene oil, mill-made cloth, pulses, vegetables and fruits, edible oil, gur and sugar from the village shop on credit. Big villages had at least one shop catering to the requirements of the people. In smaller villages fairs and weekly markets also provided facilities for trade. For bigger transactions, villagers depended on the city. The growing commutation to the city has considerably reduced the dependence on the village shops.

Exploitation of farmers by traders is well-known. Lack of market intelligence i.e., knowledge of the price prevailing in different centres, faulty weights and measures and various types of commission charged from the farmers, affected them adversely in the disposal of their produce. To negate the exploitation of farmers

1. Credit Plan for Rural Areas of the Union Territory of Delhi, *op cit* p. 20

mandis were established at Najafgarh and Mehrauli in the beginning of the present century. This was followed by establishment of agricultural produce markets at Shahdara in the east and Narela in the North. These measures were made applicable to Delhi vide a notification extending the Bombay Agricultural Produce Markets Act, 1939. Prior to this the work of the Agricultural Directorate was looked after by the Registrar of Co-operative Societies, Delhi. Since 1959, the Agricultural Marketing Directorate is headed by a Director, who also acts as Secretary to the Delhi Agricultural Marketing Board.

The directorate was entrusted with the task of regulating the purchase, sale, storage and processing of agricultural produce and establishing agricultural markets. The Act was initially extended to three *mandis*-Najafgarh, Narela and Zakhira (fodder *mandi*) in 1959. The traders of these *mandis* resisted the Act, representing the interests of producers traders, Government and local bodies regulate the market. The majority of the members and the Chairman of the Committee come from the producer class. These committees enforce fair trading practices by licensing of market functionaries, deduction of authorised market charges like commission and market fees and use of standard weights. They also maintain market yards, godowns, sheds for auctioning the produce, canteen and rest-house for farmers and parking facilities for carts and trucks. The performance of the committees in this respect has however, been dismal.

Under the Directorate of Agricultural Marketing, the following five schemes are being implemented;

1. Regulation of markets and market practices.
2. Grading of agricultural commodities under agmark.
3. Integrated scheme for improvement of market intelligence.
4. Training of personnel in agricultural marketing.
5. Grading at producer's level.

The Fourth Plan proposed to cover eight more markets, viz. Fish and eggs market at Jama Masjid, Fruit and vegetable market, *Phool Ki Mandi*, hides and skins market at Sadar Bazar, foodgrain markets at Shahadara, Tilak Nagar and Subzi Mandi.The total outlay on these schemes under the plan was Rs. 4,12,500, of which Rs. 1,09, 500 was earmerked for regulation of markets and market practices, Rs. 2,30,000for the promotion and grading of agricultual commodities and Rs. 50,000 for improvement of market intelligence.

The Delhi Agricultural Produce Marketing (Regulation) Act, 1976 replaced the Bombay Agricultural Produce Market Act 1939 on 5th November, 1976. Now the markets and market committees at Najafgarh, Narela and Zakhira are being run under the new Act.

For marketing of fruits and vegetables, the entire Union Territory of Delhi has been declared under Section 4 of the Act as a market area. Under Section 6(2) of the Act, the Fruits and Vegetables market, Azadpur was declared as the principal market, while *Phool Mandi* (Darya Ganj), Tilak Nagar (Subzi Mandi) and Kala Siding (Azadpur) as subsidiary markets. In 1979, the Food Grain Market at Shahdara has also been brought under the new Act.

The Agricultural Marketing Board proposes to set up two grading centres at foodgrain markets of Narela and Najafgarh. This will enable the agriculturists to grade their produce by sample quality test under the supervision and guidance of qualified graders and analysers and would ensure them better price.

Under the new Act, the Marketing Committees have been further strengthened and 20 per cent of the total amount of market fees is shared by the Delhi Agricultural Marketing Board and the Market Committees. The market fee is one per cent of the sale of fruits and vegetables and half a per cent on the sale of foodgrains, gur, sugar, oil-seeds, pulses, chillies, cotton seed oil etc. The market fee at Zakhira *mandi* is Rupees six per truck and Rupees two per cart. The produce is sold in open auction, on auction platforms provided by the Market Committee. The commission and the market fees are charged from the purchasers.

Agricultural Marketing Societies

In the present day economy, the price received by the producer is much lower than the one paid by the consumer. The private trade practices are often to the disadvantage of the producer. The Government efforts are directed to encourage co-operation among the producers for marketing their produce as to reduce the element of exploitation. As early as 1947, a federation under the name of Delhi State Cooperative Vegetables and Fruits Growers Marketing Federation was established to help the vegetable growers of Delhi in marketing their produce. This is no more active.

In 1967-68, there were 5 Primary Marketing Societies 1 dealing in fodder and 4 in food-grains. The total value of goods marketed by these Societies during the year amounted to Rs. 12,68,764. In the year 1979-80, there were, however, only two Marketing Societies, one at Narela and the other at Shahdara. The total produce marketed by them during the year was Rs. 9,83,009 as compared to Rs. 6,39,774 in 1978-79.

The Delhi State Cooperative Supply and Marketing Federation came into being in 1968 with 298 members, and a share capital of Rs. 1,16,945. The Federation earned a profit of Rs 2,65,610 during 1967-68. The Federation traded in fertilisers, seeds, cement, iron, steel, sugar and agricultural implements. It has six depots located at Nangloi, Qutabgarh, Bawana, Alipur, Najafgarh and Bijwasan. The Federation sold goods worth Rs. 20,424,000 during 1979-80 and earned a gross profit of Rs. 5,67,448.

The Delhi Fruits and Vegetables Consumers Cooperative Federation was set up in 1974-75 with a view to making these items available to the consumer at reasonable rates while ensuring a fair return to the producer. The purchases of the Federation amounted to Rs. 21,53,658 in 1978-79 but declined to Rs. 12,87,232 in 1979-80. The Cooperative effort seems to have failed here.

Retail and Wholesale Trade

With pressure on land in Urban Delhi, the industrial activities are generally extending to rural areas. The increasing infrastructure facilities in the rural areas encouraged the trend. The Census of India, recorded 2,237 trading and business establishments in the rural Delhi in 1970. 25 of them related to financing, insurance, real estate and business service and the remaining 2,212 to trade (retail and wholesale) restaurants and tea stalls. It found 22 establishments, 3 carrying trade at the wholesale level in the cooperative sector and 19 in the private sector. 506 restaurants/ *dhabas* and tea stalls were functioning in rural Delhi in 1970. This indicates urban influence on the rural sector. These establishments thrive on outside population and industrial and commercial activity. 1,684 establishments carried on retail trade in various items. 1,244 dealt in food articles, beverages, tobacco, *bidi*, cigarettes etc., 69 in textiles, 115 in fuel, household goods and utilities and 256 in miscellaneous products. 12 of the retail establishments belonged to Government or quasi-Government agencies dealing in trade (retail and wholesale). Restaurants and tea stalls employed in all 3,289 persons. The average size of employment was highest in the whole sale trade and lowest in the retail trade. More than three fourth of the retail establishments and sixty per cent of the restaurants and the wholesale establishments were run by one person alone.

The results of the 1981 Census have yet not been released but the unpublished date relating to the Economic Census of 1977 are available for consultation. But Economic Census covered only those establishments which employed at least one hired person and secondly, it was not conducted by a house-to-house survey. The house-to-house survey was limited only to the villages which had a population of 5,000 or more in 1971. The Economic Census recorded 8 wholesale and 268 retail establishments, and 103 restaurants/*dhabas* in rural Delhi. Here establishments with 5 or more persons from the 1971 Census have been chosen for comparison with the inventory of establishments in 1977 Economic Census. The 1977 Census grouped in this category all establishments, whose production valued at Rupees one lakh or more or employed 6 or more persons. This comparison indicates that the number of restaurants and tea stalls declined from 15 in 1970 to 10 in 1977 but the number of trading establishments, both retail and wholesale, increased from 23 in 1970 to 83 in 1977.

Of the 8 establishments engaged in wholesale trade in 1977, 5 were located in Tikri Kalan and one each in Nangloi Jat, Bijawasan and Jonapur. 103 restaurants and

tea stalls having at least one hired worker were spread out in 29 villages-Jafrabad 15, Nangloi Jat-11, Bawana-8, Chhatarpur-7, Palam-6, Satbari-5, and Libaspur, Sambhalaka, and Chandan Hola 4 each. The other villages with sizable retail establishments in 1977 were Palam(23), Jawala Heri (18), Chhatarpur (16), Masoodpur (12), Sambhalka (11), Kapashera (18), Gokalpur Dera (7) and Bawana (7). Of the 227 villages, only 56 had retail shops with at least one-hired worker, the rest had no hired worker. The Economic Census of 1977 indicates that urban sprawl accompanied by commercial and industrial activities had reached some villages on the fringe of urban Delhi.

Trading Fairs

The establishment of agricultural produce markets at Narela, Najafgarh, Mehrauli and Shahdara in the early 20th Century, gradually reduced the importance of village fairs in rural areas. Cattle fairs, however, continue in rural areas of Delhi. In one year, these are held six times in Nangloi, three times in Najafgarh and two times in Alipur. The duration of each fair is four days.

Life Insurance

The insurance business in Delhi commenced with the establishment of Bharat Insurance Company in 1896. Initially it was limited to life insurance. The business picked up during the Second World War and by 1947, 21 companies had been taken over by the Government. The Life Insurance Corporation of India came into existence on September 1,1956.

According to Census of India, 1961, in 1959, 403 or 1.25 per cent of the life insurance policies taken in Delhi related to rural Delhi. In 1960, the number of policy holders in rural Delhi increased to 1,525 or 4 per cent of the total. In 1959, the sum assured by them amounted to Rs 11,97,000 or 0.67 per cent of the total but in 1960 it increased to Rs. 1,30,28,250 or 5.69 per cent of the total. The average of the sum assured in 1959 was Rs. 2.970 for the rural areas and Rs. 5,444 for the urban areas. In 1960, the average for the urban areas rose to Rs. 5,825 but for rural areas, it jumped from Rs. 2,970 to Rs. 8,543. The life insurance thus started picking up fast in rural areas of Delhi in sixties.

CHAPTER VIII

LOCAL SELF GOVERNMENT

In the rural areas of the Union Territory of Delhi a two fold system of local self government prevails. On the one hand the rural villages (there are also urban villages in Delhi) are covered by the Panchayat Raj System and on the other the Municipal Corporation of Delhi has also its jurisdication over them. The present set-up of Local Self Government has however, evolved after many experiments in administration. It would, therefore, be desirable to go into the evolution of the present system and see the types of inter-linkages and conflicts, if any, in the present system.

Historical Evolution

Before the introduction of the above systems of local self-government, the rural areas were administered by the District Board constituted in 1884 under the Punjab District Board Act, 1883.[1] The Board looked after education, public health, medical relief, veterinary hospitals, cattle breeding, maintenance of roads, irrigation works, cattle ponds, ferries and cattle fairs in the villages. The Board derived its income from the local taxes. It also imposed profession tax, cycle tax and water tax and fees on cattle ponds, fairs and ferries. It also had some income from its own property. Besides these, the Board also received grants from the Government.

Under the States Reorganisation Act of 1956, Delhi lost its statehood and came under the control of Central Government. To facilitate the participation of citizens in administration a major reorganisation was carried out in 1957. Consequently the District Board was merged with the Municipal Corporation of Delhi (MCD) which was set up after amalgamating several local bodies. The MCD was expected to cater to the needs of the rural areas much more effectively by virtue of its relatively better fiscal position. The MCD has since been a unit of Local Self Government in the rural areas also.

But much before this reorganisation the Panchayat Raj System had come to stay in Delhi. Village Panchayats were introduced in Delhi in 1947 by extending there the Punjab Village Panchayat Act, 1939.[2] However, for a better organised Panchayat system in Delhi, the Delhi Land Reforms Act, 1954 was enacted. Besides containing land reform measures, this act also contained provisions for setting up the Panchayat Raj system. This enactment was followed by a full-fledged Delhi Panchayat Raj Act, in 1955.[3]

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1. *Delhi Gazetteer*, Delhi 1976, P. 711.
2. Delhi Administration : *Annual Administration Report* 1956-57.
3. *The Delhi Panchayat Raj Act 1955* as modified upto date with Commentary, Delhi, 1960. p. 1

The election of office bearers could not however, be held due to a difficulty arising out of section 151 of the Delhi Land Reforms Act which provided that the Gaon Panchayats shall be elected and would represent all the adults residing in the area. This provision required preparation of a list of adults by a suitable electoral machinery. But since it was not possible to do so at that time, it was felt necessary to remove this snag by suitably amending the provisions under Section 151 of the Delhi Land Reforms Act, 1954.

Pending necessary amendments, it was decided to introduce the Panchayat Raj system in Delhi and it came into force on May 12, 1956. The Punjab Village Panchayat Raj Act, 1939, as extended to Delhi, was repealed.[1] The entire rural area of Delhi was divided into 204 Gaon Sabhas and 22 Circle Panchayats. But as Panchayat elections could not be held, the Deputy Commissioner performed the duties and functions of the Village Panchayats.[2]

The necessary amendment to the Delhi Land Reforms Act, 1954 was passed by the Parliament in February, 1959. The Delhi Panchayat Raj Act was also amended simultaneously. It was not provided that all persons registered as voters under the Representation of the People Act, 1950, shall be the members of the Gaon Sabha and form the electoral college for electing representatives to the Village Panchayat. The way was thus paved for constituting the Panchayats in the Union Territory of Delhi. On 8th November, 1959, the Gram Panchayat was formally inaugurated as the "basic unit of administration."[3] Elections were held in December, 1959,[4] and in order to acquaint the elected representatives of the Panchayats to the provisions of the Delhi Panchayat Raj Act and Rules and also those of the Delhi Land Reforms Act, three camps were held during 1959-60.

The Panchayat Raj System

The Union Territory of Delhi has a single-tier Panchayat Raj system. The upper two tiers, viz., the Panchayat Samiti and the Zila Parishad do not exist in Delhi. The Gaon Panchayat and the Municipal Corporation are thus the only local self government institution operating in the rural areas.

The Panchayat Raj in rural Delhi comprises two institutions viz. Gaon Sabha and Gaon Panchayat and Circle Panchayat. The former works for the overall development of the village and the later performs judicial functions.

Gaon Sabha and Gaon Panchayat

The Gaon Sabha is constituted under the Delhi Land Reforms Act, 1954[5] and, depending on the size of village, may have one or more village under its fold.

1. Delhi Administration, *Annual Administration Report 1956–57*.
2. *Ibid.*, 1958-59
3. *Ibid.*, 1961-62
4. *Ibid.*, 1959-60.
5. *The Land Reforms Act*, 1954, Section 151 (1).

The Chief Commissioner (now Lt. Governor) is authorised to make any change in the Gaon Sabha area on his own or on the request of Gaon Sabha by a notification in official Gazette.[1] All the adults registered as voters in the Gaon Sabha area under the Representation of the People Act, 1950, are the members of the Gaon Sabha. The members of Gaon Sabha elect an executive body which is known as the Gaon Panchayat.[2] It consists of a *Pradhan* and four to ten *Panchas* (members) depending on the size of Gaon Sabha. The election is held on the basis of joint election system,[3] either by raising hand or by casting ballot.[4] The *Up-Pradhan* is elected by the members of the Gaon Panchayat from amongst themselves in a meeting convened by the *Pradhan* or in his absence the Panchayat Raj Inspector.[5]

The term of office of the *Pradhan*, *Up-Pradhan*, and the Panchayat is three years from the date of their election. The Lt. Governor may, however, extend this term upto 5 years. The *Pradhan* and *Up-Pradhan* can be removed from office by the Gaon Sabha with a two third majority.

Duties of the Pradhan

The *Pradhan* holds a vital position in the Panchayat Raj system. He convenes and presides over the meetings of Gaon Sabha and Gaon Panchayat. He supervises the finances and administration of the Panchayat. As the Chief executive of the Panchayat, he implements all the decisions of the Panchayat for the development of the village. He also arranges the assessment and collection of taxes and fees imposed by the Panchayat and pursues all legal matters on behalf of the Panchayat.[6] Thus, the success of the Panchayat Raj is largely dependent upon the capability of the *Pradhan*.

Meetings of the Gaon Sabha and the Panchayat

The Gaon Sabha meets twice a year, first after the harvesting of *kharif* crop and the next after the harvesting of *rabi* crop. The meetings are presided over by the *Pradhan* and in his absence, by the *Up-Pradhan*. In these meetings the Gaon Sabha considers periodic reports of business as submitted by *Pradhan*. A special meeting of the Gaon Sabha can also be called by the Pradhan if such a meeting is requisitioned by one-fifth of its members.

Regarding the periodicity of Gaon Panchayat meetings there is no definite rule. It can meet on any day and for any number of times depending upon the need, nature and quantum of administrative work.[7] But for calling a meeting of the Panchayat,

1. *The Delhi Panchayat Raj Act*, 1954, Section 3(1)
2. *The Delhi Land Reforms Act*. 1954, Section 151(2)
3. *The Delhi Panchayat Raj Act*, 1954, Section 13(2-3)
4. *The Delhi Panchayats Raj Rules* 1959, Rule 31(2)
5. *Ibid.*, Rules 38 and 56
6. *Ibid.*, Rule 84
7. *Ibid.* Rule 75

there has to be an advance notice of ten days. Special meeting can also be convened if it is requisitioned by at least three members of the Panchayat.

Duties and Functions of the Panchayat

The Gaon Panchayats have been assigned multifarious duties by the two legislations referred to above. The Delhi Land Reforms Act required Panchayats to develop and improve agriculture and horticulture to preserve, maintain and develop forests and trees and to maintain and develop *abadi* sites and village communication. Other functions include the management of *hats*, *bazars* and *melas*, development of cooperative farming and consolidation of holdings. The Panchayats have also to work for the development of cottage industries, animal husbandry, poultry farming, fisheries and piggeries. The Delhi Panchayat Raj Act, 1954 also assigned many functions to the Panchayats, primary and discretionary both. Discretionary functions are municipal in nature, and include public health, medical relief and primary education.[1] After the enactment of the Delhi Municipal Corporation Act, 1957, these functions have been taken over by the Municipal Corporation.

The functions of the Panchayats now relate to certain economic, regulatory and managerial affairs, vital statistics and public safety. The economic functions include preparation of production programme, budgeting for programmes, reclamation of waste land and development of agriculture, commerce and Industry. The regulatory functions relate to removal of encroachments on public land, proper disposal of the dead bodies, and holding of *melas*, markets and *hats*. Managerial functions include proper management of its properties. Functions relating to vital statistics and public safety include registration of births, deaths and marriages, maintenance of census records and protection of life and property care of fire. There are also residuary discretionary functions assigned to them.[2] These include securing Government assistance for the village, increasing agriculture production, arranging for cooperative management of land and other village resources, encouraging use of improved seeds, assisting farmers in obtaining Government loans and providing relief against famine and other natural calamities. The Gaon Panchayats are also supposed to plant trees in public places, improve the breeds of cattle, provide veterinary services, promote goodwill between different communities, and set up libraries, reading-rooms, *akharas*, clubs etc. for recreation.

Powers of the Gaon Panchayat

Panchayat may be authorised by the Lt. Governor to collect land revenue and other dues[3] payable to the Government allowing it a certain percentage as collection charges.[4] All lands except privately owned, tenanted, subtenanted or leased or under

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1. *The Delhi Panchayat Raj Act*, 1954 Section 18
2. *Ibid.*, Section 19
3. *The Delhi Land Reforms Act, 1954* Section 133
4. *The Delhi Panchayat Raj Act* 1954, Section 27

the grove, vest in the Gaon Sabha[1] and the Panchayat is entitled to lease it out to the landless labourers and Harijans for house site or cultivation with prior permission of the Deputy Director of Panchayats. The Panchayats also hold control on all the public streets and waterways situated within its jurisdiction.[2] The Panchayats exercise general supervision on *amin*, process server, vaccinator and irrigation petrol.

Finance

To meet its financial obligations Panchayat has 'Gaon Sabha Area Fund'. All receipts coming from the following sources are credited to this fund.

1. Remuneration on collection of land revenue and other dues payable to the Government.[3]
2. Proceeds of the taxes levied.[4]
3. Government grants;
4. Fees and fines for compounding of any offence or order by a court;
5. Sale proceeds of all dust, dirt, dung and refuse including the dead bodies of animals;
6. A portion of the rent or other proceeds of *nazul* property as decided by the Lt. Governor;
7. Receipts from the levies imposed on the markets, fairs *hats*, etc.
8. Borrowing from the Government; and
9. Transfer of the tax money realised by MCD in the Gaon Sabha area.[5]

Taxes

The taxes levied by the Gaon Panchayat are of two types: (1) tax on the rent payable by an *Asami* (tenant) (2) tax on land revenue payable by a *Bhumidar*. These taxes do not nowever, exceed 6 paise per rupee, the total burden of these taxes on an individual should not exceed Rs. 250 per annum in any case. Panchayats levy these taxes with the prior sanction of the Lt. Governor.[6] Panchayat can also benefit from voluntary contribution of physical labour by the Gaon Sabha members[7] and can raise funds for specified purpose by accepting donations from the public.[8]

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1. *The Delhi First Land Reforms Act*, Section 154
2. *The Delhi Panchayat Raj Act*, op. cit. Section 20
3. *The Delhi Land Reforms Act*, 1954 Section 234(c)
4. *The Delhi Panchayati Raj Act*, 1954 Section 33.2 (a)
5. *The Delhi Municipal Corporation Act*, 1957 Section 507(a)
6. *The Delhi Panchayat Raj Act* 1954 Section 39(i)
7. *Ibid.* Section 38(1)
8. *The Delhi Panchayat Raj Rules*, Delhi 254

Loans and Grants

Panchayats can also seek loan from Delhi Administration for remunerative projects like shops, subject to a limit of Rs. 10,000.[1] Gaon Panchayats also receive a grant of Rs. 5,000 each for carrying out development works as follows:[2].

(1) Maintenance and development of wells and tanks.

(2) Reclamation of waste land.

(3) Maintenance of Panchayat *ghars*.

(4) Construction and maintenance of link roads.

(5) Construction of streets in village *abadies*.

(6) Provision of storm-water drains and soaking pits.

(7) Filling of insanitary depressions.

Every Gaon Panchayat prepares an estimate of income and expenditure in the form of an annual budget. The budget thus prepared is presented at the *kharif* meeting of the Gaon Sabha.[3] At the *rabi* meeting, the Gaon Panchayat presents the actual and expected receipts and expenditures for the year. The Gaon Sabha may either pass them or refer them back to the Gaon Panchayat alongwith its directions. In such cases, the *Pradhan* has to convene an extra-ordinary meeting of the Gaon Sabha within a fortnight and present the modified budget. The budget thus passed by Gaon Sabha is finally approved by the Deputy Director of Panchayats.[4]

The Circle Panchayat

The Circle Panchayat is a judicial body constituted by grouping a number of contiguous Gaon Sabha areas into a circle. Every Gaon Sabha elects specified number of *Panchas* for the Circle Panchayat. The number of *Panchas* to be elected by a Gaon Sabha depend upon the population of the village. Villages with a population of less than 1,000 elect two *Panchas* while those with more than 1,000 population elect three *Panchas*.[5] The *Panchas* with specified qualification[6] are elected directly by the Gaon Sabha members but the *Sarpanch* and *Naib Sarpanch* are elected indirectly by the *Panchas* from among themselves. The term of office of the Panchas, *Sarpanch* and the *Naib Sarpanch* is three years. *A Panch* can however, be removed if he refuses to act or becomes incapable of acting or abstains for more than two consecutive months from the sittings of the Panchayat *Adalat* (court) without a reasonable cause. He can also be removed if he is found guilty of misconduct.

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1. Delhi Administration *Rules for Grant of Loans to Gaon Panchayats*, 1972.
2. *Delhi Administration (Development Department) Rules for the Grants of Matfhing Grant to Village Panchayats under Development Scheme through village Panchayats*, 1979
3. *The Delhi Panchayat Raj Act*, 1954 Section 43(i) (a)
4. *The Delhi Panchayat Raj Rules*, 1959, Rules 224(b)
5. *The Delhi Panchayat Raj Act*, 1954, Section 44(3)
6. *Ibid.*, Section 44(4)

Functions of the Circle Panchayat

The Circle Panchayats have been assigned two types of functions-judicial and developmental.[1] For judicial functions the *Sarpanch* constitutes a bench of five[2] *Panchas* from amongst circle *Panches*. In constituting the bench for a particular case the *Sarpanch* ensures that one *Panch* each is taken from Gaon Sabha to which the complainant and the defendant belong to.[3] The remaining three *Panches* are taken from other villages. In case the involved parties belong to different Circles, the Panchayat *Adalat* is constituted by the Panchayat Raj Inspector with *Panchas* from both the Circles.[4] The Lt. Governor can constitute a special bench for the trial of disputes between any two parties including Gaon Sabhas.[5]

Jurisdiction of the Circle Panchayat is limited to certain types of disputes and litigations. It can try any suit (a) for money due on contract, except a contract in respect of immovable property; (b) for the recovery of movable property or its value; (c) for compensation for wrongfully taking or injuring a movable property; and (d) for damages caused by cattle trespass. But *Adalat's* jurisdiction is limited only to those disputes where the value does not exceed Rs. 200.[6] However, the Lt. Governor can raise this limit upto Rs. 500. By mutual consent the parties can prefer their suit before the Panchayat *Adalat*, provided the value does not exceed the specified limit. All the revenue cases under Sections 27 and 28 of the Delhi Land Revenue Act, 1954, can be tried by the Panchayat *Adalat*.

The Circle Panchayat is empowered to try a number of cases under the Indian Penal Code, the Cattle Tresspass Act, 1971, and the Delhi Public Gambling Act, 1955. These include theft, possession of stolen property, misappropriation of property, assault, intimidation, tresspass, public nuisance, mischief etc. All suits are to be filed before the *Sarpanch*. But if the Adalat feels that the dispute requires trial by a regular court of law, it may transfer the case to a competent court. Every complainant is required to pay a nominal fee to the Panchayat *Adalat* depending upon the value of the case as specified below:

Fees to be charged for the trial of civil suits.

Value of the Civil Suits (Rs.)	*Fee to be chargeed*
1. upto 10	25 paisa
2. 10.1-25	50 paisa
3. 25.1-50	1 Rupee

1. *Delhi Panchayat Raj Act*, 1954, Section 45.
2. *The Delhi Panchayat Raj Rules* 1959, 127
3. *Ibid*, 127(2)
4. *Ibid.*, Rule 128
5. *The Delhi Panchayat Raj Act*, 1954, Section 50(2)
6. *Ibid.*, Section 55(1)

		Fee to be charged
4.	50.1-200	1 Rupee + 25 paise for Rs. 10 or part thereof, in excess of Rs. 50
5.	More than 200	Rs. 4.75 + 40 paise for every Rs. 10 or part.

The Panchayat Adalat can impose a fine upto Rs. 100.[1] It is recovered according to the provisions of Section 386 of the Code of Criminal Procedure, 1898. In case the Panchayat *Adalat* finds any difficulty in realising a fine or executing a decree, it can seek the intervention of a Magistrate or Senior Sub- Judge as the case may be.[2] There is no provision for appeal against the decision of the Panchayat *Adalat*. However, the aggrieved party can pray for a revision by a Senior Judge, Additional Magistrate or Collector in respect of civil, criminal or revenue proceedings respectively. No legal practitioner is allowed to appear before the Panchayat *Adalats*, except in the case of an arrest. The expenditure of a Circle Panchayat is met by the constituent Gaon Sabhas in equal measure. The earnings are also distributed evenly among the member Gaon Sabhas. Circle Panchayat also performs certain developmental functions if the Lt. Governor so desires. These functions are of two types-obligatory and discretionary. Under obligatory functions, the Circle Panchayats take up those development projects which involve more than one village of the Circle.[3] The Circle Panchayat also performs the duties of a Gaon Sabha which has been superseded.

The discretionary functions require Circle Panchayats to hold general supervision and control over their constituent Gaon Sabhas and Gaon Panchayats, if asked by the Lt. Governor.[4]

The Panchayat Samiti

The Panchayat Samiti was set up in Delhi through a notification by the Lt. Governor on 15th February, 1961. Hence it is a non-statutory advisory body existing at the Block level. It comprises three types of members viz. (a) indirectly elected and coopted members, (b) invitees, and (c) officials of Delhi Administration. The first category includes *Pradhans*, members of Parliament, Metropolitan Councillors and Municipal Councillors, all representing the Block. One representative each from the Cooperative Marketing Society of the Block, Jamia Rural Institute and Agricultural Produce Market Committees of Narela and Najafgarh are also included in the Samiti. A Harijan and a woman are also coopted to the Samiti if they are not otherwise re-

1. *Delhi Panchayat Raj Act*, 1954, Section 53 B (9)
2. *Ibid.*, Section 76.
3. *Delhi Panchayat Raj* Act 1954, Section (94), see also Section 34
4. *Ibid.*, Section 45 (B)

presented in it. The category of invitees includes representative of the Municipal Zonal Office, Medical Officer of Primary Health Centre and the Sanitary Inspector. The category of officials includes the Extension Officer, Cooperative Inspector, Panchayat Raj Officer, Assistant Social Education Officer, Assistant Surgeon, and the Veterinary Officer posted in the Block. The Block Development Officer acts as the Member-Secretary of the Panchayat Samiti. All the *Pradhans* of Gaon Panchayats of the Block elect from amongst themselves a Chairman, who presides over the meeting. The Samiti generally meets once in a month and has a term of three years.

Functions of the Samiti

The Samiti discusses the problems of the villages within its jurisdiction and tries to solve them with the help of Delhi Administration. The functions of the *Samiti* include advising the Delhi Administration and the Municipal Corporation of Delhi, on various development schemes. It also disburses loans and grants placed at its disposal by the Administration. It prepares, coordinates and implements the development plans for the Block. Samiti can also perform any other task assigned to it, by Delhi Administration or by Municipal Corporation of Delhi.

Supervision and Control

In order to have a proper check on the system, the Lt. Governor enjoys sufficient powers of supervision and control. He can call for any record or document to review the activities of any Gaon Panchayat and Circle Panchayat and give appropriate directions. The Gaon Panchayat has to submit its budget estimates for the approval of the Deputy Director of Panchayats. For sanctioning the expenditure beyond Rs. 900 the Panchayats have to seek approval of the competent authority. Any expenditure above Rs. 30,000 needs the approval of the Lt. Governor.

The Lt. Governor can stop the execution of any resolution and proceeding of the Gaon Sabha, Gaon Panchayat or Circle Panchayat, if it is likely to cause annoyance or injury to the Public. If a Panchayat institution is unable to perform well, the Lt. Governor can warn it and if the warning goes unheeded, he can even supersede it.

The Supervisory Departmetof the Panchayat Raj works under the Development Department of the Delhi Administration. The Deputy Commissioner who is also Special Secretary (Development), is *ex-officio* head of this Department. The Lt. Governor exercises his control on Panchayats through Deputy Development Commissioner. The Additional District Magistrate (Development) is the *ex-officio* Director of Panchayats. He assists the Deputy Commissioner in development works and in the administration of Panchayat Raj institutions. Under him, there are Sub-Divisional Magistrates who work as *ex-officio* Deputy Directors of Panchayats. The *Tehsildar*, who is assisted by two *Naib-Tehsildars* looks after the litigation work.

Working of the Panchayat Raj

The Union Territory of Delhi has a total number of 258 villages with a population of 9.69 lakhs according to the 1981 census. These villages are grouped into 204 Gaon Sabhas and Gaon Panchayats and 23 Circle Panchayats. Of the 204 Panchayats, 12 are superseded because of their unsatisfactory performance. The effective Gaon Sabhas and Gaon Panchayats are, therefore, only 192 as shown in the following table:-

Table-I

Number of Village Panchayats in Delhi

Name of the Block	No. of. villages	Population	No. of Panchayats	No. of supersede-ed Panchayats
1. Alipur	61	91,743	46	3
2. Kanjhawala	53	1,11,873	52	4
3. Najafgarh	75	1,13,147	60	3
4. Mehrauli	30	1,13,147	26	1
5. Shahdara	39	33,968	20	1
Total:	258	4,64,878	204	12

(Delhi Administration (Panchayat Raj Wing,) Delhi).

Out of 192 working Gaon Panchayats, 39 are facing serious allegations. The charges brought against them include cutting of trees, encroachment on lands, misuse of funds, property and powers, financial irregularities, corruption etc.[1]

In the beginning Gaon Panchayats earnestly embarked upon a number of development projects, like the construction and repair of wells, tanks, pavements, Panchayat Ghars, roads culverts, school buildings, library rooms, tanks and installation of hand pumps.[2] But gradually, the tempo started slowing down and now for the last five years or so the Panchayats have not done anything substantial.[3] The activity of the Panchayats is now limited to management of the Gaon Sabha lands and distribution of land to the landless and the Harijans.

In Delhi the Gaon Sabhas own about 36,000 acres of land. Since 1973-74, the Panchayats have distributed 18,369 plots to the landless and the Harijans. Of these, 5,203 plots have been given for agricultural purposes and 12,166 for house sites. The table below details the Block-wise distribution of lands;

1. *Unpublished Departmental Notes, Delhi Administration (Panchayat Raj)*
2. Delhi Administration, *Annual Administration Report, 1960-61*
3. Based on our discussion with rural people and the office bearers of Gaon Panchayats.

Table-2

Number of plots of land Allotted to the Landless and Harijans by the Gaon Sabhas.

Blocks	Agriculture land			House sites		
	Harijans	Others	Total	Harijans	Others	Total
1. Mehrauli	98	58	156	373	316	689
2. Shahdara	305	88	393	270	142	412
3. Najafgarh	1477	1116	2593	1105	1467	2572
4. Kanjhawala	717	461	1178	1883	1379	3262
5. Alipur	3096	2107	5203	6107	6059	12166

(Delhi Administration (Panchayat Raj Wing), *Annual Report*, 1981-82)

Financial Inadequacy

The main reason for the poor performance of Panchayats is the lack of finances. Panchayats have not so far been able to utilise their powers to raise funds properly. The MCD also does not share its meagre income from property tax in rural areas[1] with the village Panchayats.

Thus the income of Panchayats is limited to the lease money received from the allottees of the Gaon Sabha lands, sale proceeds of the fish from the Panchayat Fisheries, sale of the Panchayat trees and compensation received for the acquisition of the Gaon Sabha lands. Some Panchayats in south and south-west Delhi have a better financial position because they earn good lease money from the quarries. But even Panchayats with better financial condition, have not utilised their resources for development purposes and their money in saving bank accounts lies unused. The income of the Panchayats generally ends upon the amount of compensation received from Government acquisitions.

An account of the income and expenditure of the Panchayats is given in the following table:

Table-3

Income and Expenditure of Gaon Panchayats in Delhi

Year	Income	Expenditure
1960–61	2,73,626	2,01,846
1962–63	7,75,800	5,36,900
1968–69	2,10,036	1,18,680
1970–71	8,02,130	3,63,984
1972–73	53,841	50,786

(Delhi Administration, Annual Administration Reports)

1. Information collected from the Narela Rural Zone of the MCD

Government loans and grants are the other two sources of Panchayat's income. Each Panchayat could get a loan of Rs. 10,000 from the Development Department (Panchayat) of the Delhi Administration for remunerative schemes. Upto 1980, 102 Gaon Panchayats had availed themselves of this facility as stated in the following table. This facility was discontinued in 1980–81 because of inadequate response from the Panchayats.

Table-4

Loans Advanced to Gaon Panchayats: 1973–74 *to* 1979–80

Year	No. of Panchayats
1973–74	5
1974–75	7
1975–76	10
1976–77	10
1977–78	10
1978–79	35
1979–80	25
Total	102

The response to matching grant of Rs. 5000 by the Panchayat Raj Wing of the Delhi Administration has also not been encouraging. Since the inception of this Scheme in 1979, the grant has been approved only in the case of five Panchayats.

Development Work

Substantial funds are allocated by the Development Department of the Delhi Administration for various plan schemes in the villages. These include construction of Panchayat *Ghars*, development of village wells, installation of television sets, construction of *chaupal* for Harijans, development of house sites for the landless and the Harijans etc. The Panchayat Raj Wing of Delhi Administration has constituted a Technical Cell to undertake construction work of Panchayats and also works in progress under various plan schemes.

Municipal Corporation of Delhi

The MCD, is another institution of local self government in rural Delhi. It performs all municipal functions, both obligatory and discretionary, in Delhi villages. Out of 100 councillors constituting the MCD, 16 are elected from rural areas. The obligatory functions of the MCD include establishment of hospitals and dispensaries with a view to public health, construction, maintenance and lighting of roads and streets, opening and maintenance of market centres, playgrounds and parks, protection against fire, spread of primary education and generation and supply of electricity.[1]

1. *The Delhi Municipal Corporation Act,* 1957 Section 42

The discretionary functions include matters like social, educational and cultural development and public welfare.[1]

With a view to serve rural Delhi more effectively, the MCD has decentralised its administration by creating separate rural zones. Till 1977, there was only one zone for the entire rural Delhi. But later two rural zones of Narela and Najafgarh headed by an Assistant Zonal Commissioner have been formed. Decentralisation of municipal administration at zonal level has proved very useful in augmenting civic services and amenities.

To help MCD to serve the rural population better, the MCD Act provides for the constitution of a Rural Area Committee (RAC).[2] The Committee comprises all councillors elected from rural wards. They elect from amongst themselves a Chairman and a Vice-Chairman. The Committee advises the Corporation on all policy matters pertaining to rural areas, on taxes to be levied and expenditure to be incurred. The Corporation, its Standing Committee and the Commissioner have to consult the RAC. The Committee also reviews the work of MCD from time to time.

The MCD at Work in the Rural Areas

The MCD, has been providing various services and amenities in rural areas. These include provisioning and maintenance of a number of dispensaries, primary schools, roads, street lighting, drainage and sanitation. It has also undertaken the ambitious scheme of providing potable water to every rural village.[3] The MCD is incurring large expenditure in providing these services. Between 1970-71 and 1974-75, the MCD had an income of Rs. 139.08 lakhs from the entire rural zone. It spent Rs. 1786.08 lakhs during the same period thus incurring a deficit of Rs. 1647.26 lakhs as evident from the following table:-

Table-5

Income and Expenditure of the MCD in the Rural Zone

Year	Income	Rs. in lakhs
1970-71	11.74	248.88
1971-72	19.72	290.42
1972-73	25.25	356.41
1973-74	31.69	399.52
1974-75	50.68	491.11
Total	139.08	1786.34

(Municipal Corporation of Delhi, Budget Estimates)

1. *The Delhi Municipal Corporation Act*, 1957, Section 43
2. *Ibid.* Section 39
3. *The Hindustan Times*, November 18, 1981

Even in Narela and Najafgarh zones which are predominantly rural, the MCD had incurred a deficit of Rs. 2458.73 lakhs between 1977-78 and 1980-81 as may be seen in the following table:

Table-6

Income and Expenditure of the MCD in the Rural Zones of Narela and Najafgarh

Year	Income	Expenditure (in lakhs)
1977-78	30.49	501.90
1978-79	35.82	624.39
1979-80	22.40	671.97
1980-81	34.06	782.24
Total	122.77	2581.50

(Municipal Corporation of Delhi)

In view of huge deficits in providing services and amenities to the rural population the MCD had pleaded before the Commissioner of Inquiry into the Finance's of the MCD and the NDMC (Morarka Commission) for compensation in the form of rural areas grant. The Commission was apparently concerned about the magnitude of financial drain on the MCD's resources and it therefore, 'recognised the need of a special grant-in-aid.'[1] Owing to heavy expenditure incurred by them on rural areas it, therefore, recommended a grant on cent per cent basis to cover the net deficit, provided the MCD maintained a separate account of income and expenditure in respect of rural areas. The MCD thereafter, started a separate rural account but failed to get any compensatory grant either from Delhi Administration or from Central Government. Since 1977, the MCD has been finding it more and more difficult to provide adequate civic services to rural areas.

Ashoka Mehta Committee Report and its aftermath

In order to review the working of the Panchayat Raj institutions and suggest methods of reconstituting them, the Government of India appointed Ashoka Mehta Committee in December, 1977. The Committee submitted its report in August, 1978, with elaborate recommendations.

The Ashoka Mehta Committee suggested a two-tier system of Zila Parishad and Mandal Panchayat, instead of the existing three-tier system of Zila Parishad, Panchayat Samiti and Gram Panchayat.[2]

1. Government of India (Ministry of Home Affairs) *Report of the Commissioner of Inquiry into the Finances of the Municipal Corporation of Delhi and New Delhi Municipal Committee*, New Delhi, 1968, P. 39.
2. Government of India, *Report of the Committee on Panchayat Raj Institutions*, New Delhi, August 1978.

In December, 1978 the Lt. Governor of Delhi constituted an Advisory Committee chaired by the Chief Secretary of the Administration to consider Ashoka Mehta Committee Report and to "submit its views and recommendations keeping in view the special features of the Union Territory of Delhi." The Advisory Committee recommended the acceptance of Ashoka Mehta Committee's recommendations in toto. The Committee felt that the existing system of MCD serving the rural areas has failed chiefly because of its preoccupation with urban areas. At the grass-root level the Gaon Panchayats have also failed to bring the desired results because they are not viable units. It, therefore, suggested the replacement of MCD in rural areas by the Zila Parishad and formation of Mandal Panchayats by grouping the villages so that each Mandal has a population of 15,000 to 20,000.

The Committee expressed dissatisfaction with the Nyaya Panchayats and suggested their abolition. The Committee has also worked out a detailed list of the functions of Zila Parishad and its sources of income.

These recommendations regarding follow-up action of the Ashoka Mehta Committee Report were considered by the Executive Council of the Delhi Administration in April, 1979. It did not favour the adoption of the new system and desired that the existing system should continue and need be strengthened wherever there is a scope to do so. In order to provide a better integration between the MCD and the Gaon Panchayats, the council decided to refurbish the Rural Area Committee of the MCD by giving representation to all the five Presidents of the Block Panchayat Samities in it. Such a reconstituted Rural Area Committee could also function like a Zila Parishad they opined. In order to provide it with additional funds, the MCD was asked to "make necessary arrangements."

The Executive Council, recommended the reconstitution of the Gaon Sabhas so that every Gaon Panchayat represented a population of 15,000 to 17,000 and became a viable unit for contributing to development activities. The Council agreed with the views of the Advisory Committee on decentralisation of judicial system down to the Block-level and the transfer of land revenue to Gaon Panchayats forthwith. The views expressed by the Executive Council were forwarded to the Government of India for consideration in May, 1979.

Future Outlook

Delhi is a fastly expanding metropolis devouring the rural lands at a remarkable speed. The urban growth has already touched the borders of U.P. in the east and Haryana in the south and west. The rural character of many adjacent areas of urban Delhi has been obliterated by growing resettlement colonies. Narela and Najafgarh have long been urban areas of the Union Territory. Rural settlements, like, Alipur, Bijwasan, and Bawana have almost shed their rural character.

To escape from the urban development controls and zoning regulations, many industries are now being set up within the *lal dora* (habitation) area of the villages. These are eroding the rural character of the villages and adding to the haphazard growth and environmental pollution. The industrial complex of Narela and the sprawling township of Rohini when completed will totally-urbanise large part of rural Delhi.

These developments suggest that the Union Territory of Delhi is destined to become totally urban in near future. Consequently, the need for a separate local self government for rural Delhi is bound to weaken within the present decade. It is very likely that before long the Panchayat Raj set up for rural Delhi is dispensed with and a unified local self government formed for the entire territory of Delhi. In such an event, the existing municipal zones serving the rural areas would be sub-divided with a view to better services. More intensive efforts would be required from the MCD to upgrade the level of civic services in the outlying rural areas, so that the present disparities in civic services between the core city and its rural suburbs are removed.

CHAPTER IX

COOPERATIVE MOVEMENT

Introduction

The cooperative movement was officially launched in India in 1904 with the passing of the first Cooperative Credit Societies Act. This was based on the recommendations of a Committee appointed by the Government of India under the Chairmanship of Sir Edward Law in 1901.

The cooperative movement developed in India in a phased manner. The first stage began with the enactment of the Cooperative Credit Societies Act, 1904. It provided for the organisation of primary cooperative credit societies amongst the agriculturists, artisans and persons of limited means. From 1906 to 1911 there was a rapid growth in the number of societies and their activities. The Cooperative Societies Act, 1912 was passed to remove the shortcomings of the 1904 Act. It forms the basis of the present movement. Subsequently, the Mechelagon Committee also known as the Committee on Cooperatives, appointed in October, 1914 made far reaching proposals for the progress of the movement.

The second phase began when Bombay passed a separate Cooperative Act in 1925. The reports of the Royal Commission on Agriculture and Central and Provincial Banking Enquiry Committees made noteworthy contributions to cooperative movement.

The third phase coincided with the world wide economic depression in 1929. This greatly hampered the expansion of the movement.

The fourth phase was a period of war. Introduction of economic controls stimulated the growth of consumer cooperative stores and cooperative marketing and social service societies.

During the fifth phase i.e. after the partition of the country, the cooperatives were asked to shoulder the burden of rehabilitation of displaced persons. Subsequently, Planning Commission used cooperative movement as an instrument for the implementation of Five Year Plans.

The Beginnings

The Cooperative Movement started in Delhi in the first quarter of the 20th century when the Cooperative Societies Act, 1912 was passed. After the enforcement of this Act, the village officers viz. *jaildar, lamberdar, safed-posh, patwari* and *kanoongo* were asked to promote the cause of cooperation. Subsequently, most of the societies

thus formed were amalgamated to form multi-purpose cooperative societies on the recommendations of the Cooperative Planning Committee, 1946.

In the beginning, the rural societies generally confined themselves to agricultural credit with unlimited liability. But the Cooperative Planning Committee, 1946 recommended that the liability of multi-purpose societies be kept limited with divisible profits. In 1925, the Bombay Cooperative Societies Act was extended to the Union Territory of Delhi as the Cooperative Societies Act of 1912 was considered inadequate. During the partition of the country, the rehabilitation programme was entrusted to cooperatives. After Independence, the cooperative movement was accepted as one of the means for achieving socialistic pattern of society.

Till 1947, the Union Territory of Delhi was under the administrative control of Registrar, Cooperative Societies, Punjab, NWFP and Delhi. Asstt. Registrar Cooperative Societies Gurgaon and Dy. Registrar Cooperative Societies, Ambala administered the cooperative department of Delhi. The Staff comprised six special inspectors and two clerks. The cost of establishment was met by grant-in-aid from the Government and the fees collected from the societies. These collections were credited to Delhi Audit Fund and kept with the Delhi State Cooperative Bank. The account was operated by the Asstt. Registrar Cooperative Societies, Gurgaon upto 1946. In 1946, the post of Asstt. Registrar, Cooperative Societies was created in Delhi but the incumbent continued to be on deputation from Punjab. Upto 1948, the movement was linked with Punjab and the staff was also borrowed from there.

In 1948, the Dy. Commissioner, Delhi was designated as ex-officio Registrar, Cooperative Societies, Delhi and with this, the cooperative movement in Delhi was put on a firm basis. Three Sub-Inspectors were promoted as Inspectors to strengthen the Department.

With a view to handling the rehabilitation problem of the refugees, one post of Asstt. Registrar was created in 1949. It was later on merged with general section and the Registrar on deputation from Punjab was designated as Dy. Registrar, Co-operative Societies, Delhi. The post of Registrar was created some time in 1954 and the Development Commissioner was appointed as ex-officio Registrar.

Subsequently, the posts of Joint Registrar, Dy. Registrar and Asstt. Registrar were created. The cooperative work in Delhi is now under the charge of the Executive Councillor (Development). The Registrar of Cooperatives Societies is the head of the Department as well as Special Secretary, Cooperatives. He is assisted by two Joint Registrars, 4 Deputy Registrars and 11 Assistant Registrars.

Progress of Cooperative Movement in Delhi

The number of Cooperative Societies increased from 3481 in 1976 to 5980 in 1985. This indicates a phenomenal growth of 74.8 per cent. The details are indicated in the following table:

Registered Societies as on 30th June each year

Category	1976	1977	1978	1979	1980	1981	1985
Industrial	986	994	994	1,003	1,010	1,010	1,299
Urban (T&C)	826	830	812	807	822	846	1,011
Stores	555	561	584	483	590	599	685
Housing	406	407	409	415	753	813	2,227
Package (Rural)	645	737	754	728	753	754	758
Total	3,421	3,529 (3.2)	3,553 (3.9)	3.563 (3.4)	3,928 (14.8)	4,022 (17.9)	5,980 (74.8)

(Figures in brackets represent present growth of registration over 1976)

But the number of effective societies was far below than those registered. Their number, however, increased from 2,771 in 1976 to 5,104 in 1985. The following table shows the gradual increase in the number of effective societies:

Effective Societies as on 30th June each year

Category	1976	1977	1978	1979	1980	1981	1985
Industrial	710	709	718	727	733	742	1,047
Urban (T&C)	737	742	751	764	774	816	929
Stores	399	403	428	427	425	430	499
Housing	396	380	374	304	649	709	2,153
Package (Rural)	529	622	520	423	452	457	466
Total	2,771	2,856	2,791	2,645	3,043	3,162	5,104

292 package societies (rural) were under liquidation on 20th June, 1985 as against 116 in 1976. In comparison to other types of societies, these figures are on a higher side. The following table clearly reflects the position:

Societies under liquidation as on 30th June each year

Category	1976	1977	1978	1979	1980	1981	1985
Industrial	279	285	276	276	277	259	252
Urban (T&C)	89	88	61	43	38	41	72
Stores	156	158	156	156	165	166	186
Housing	10	27	35	111	104	97	74
Package (Rural)	116	115	234	305	301	298	292
Total	650	673	762	891	885	861	876

The growth of package societies has also been very discouraging. In 1976-77 the number of such societies was 94. But in 1984-85 the number of registrations came down to 7 only. This again does not compare well with other types of societies. The package societies registered 11 cancellations in 1978-79. In 1980-81 the cancellations numbered 13 and in 1984-85 there was no cancellation.

The membership of working societies has shown modest improvement over a period of five years. On 30th June, 1976 total membership of such societies stood at 512,00 as against 959,000 in 1985. The membership of package societies (rural) decreased from 46 in 1976 to 44 in 1981 but the number again increased to 52 by June, 1985. The share capital of the package societies, however declined from Rs. 51.5 lakhs in 1977 to Rs. 46.9 lakhs in 1985. The deposits of package societies, increased from Rs. 17.7 lakhs in 1976 to Rs. 21.4 lakhs in 1981, but thereafter sharply decreased to Rs. 7.9 lakhs by 1985.

Government loans disbursed to Cooperative Societies amounted to Rs. 46.36 lakhs on 31st March, 1981. The recovery amounted Rs. 23.46 lakhs, thus leaving Rs. 22.9 lakhs outstandig with the societies. Big borrowers owing 3,000/-or more of co-operative loans are reluctant to repay the loans. Bigger farmers with holdings of 2.5 acres and above are also defaulters in this respect. The lack of follow-up action on the part of the credit institutions, unwillingness to take legal action and political interference encourage the defaulters. If honest borrowers are given incentives and political pressure is eliminated the cooperative credit system could work more effectively and purposefully.

In 1979-80 (as on 30.6.80), Delhi State Cooperative Bank advanced Rs. 3942 thousands as loans-Rs. 3757 thousands short term and Rs. 185 thousand medium term. Primary Agricultural Credit Cooperative Societies advanced short term loans of Rs. 3,526 thousand and long term loans of Rs. 1,056 thousand.

Marketing societies sold agricultural produce worth Rs. 2,290 thousand and agricultural inputs worth Rs. 667 thousand. Selected data on cooperative activity in 1979-80, and 1984-85 are as follows:

	(Value in Rs. 1000)	
(A) Delhi State Cooperative Bank	1979–80	1984–85
(i) Share capital		
(Government share)	8683 (4030)	14200.90 (6000.03)
(ii) Deposits	95975	310600.33
(iii) Loans advanced		
(a) Short term	3757	N.A.
(b) Medium term	185	N.A.
(c) Total	3942	18700.86

(iv) Loans outstanding		
(a) Short term	15223	N.A
(b) Medium term	4319	N A.
(c) Total	19542	N.A.
(v) Loans overdue		
(a) Short term	13399	N.A.
(b) Medium term	2639	N.A.
(c) Total	16038	22800.25
(B) *Primary Agricultural Credit Cooperative Societies*		
	1979–80	1982–83
(i) Number of societies	194	188
(ii) Membership (Number)	24,752	39,000
(iii) Villages covered (Number)	142	159
(iv) Share capital	4,940	38,251
(Government share)	451	1,152
(v) Deposits	2,346	1,623
(vi) Working Capital	25,658	27,196
(vii) Loans Advanced		
(a) Short term	3,526	7,657
(b) Long term	1056	933
(c) Total	4,582	8,590
(viii) Loans outstanding		
(a) Short term	10,694	1,2513
(b) Long term	1,657	1,742
(c) Total	15,877	14,255
(x) Loans overdue		
(a) Short term	10,694	9,949
(b) Long term	602	1,891
(c) Total	11,296	11,840
(C) *Marketing Societies*		
(i) Primary societies (primary)	2	2
(ii) Membership (Number)	886	1,806
(iii) Share Capital	124	54
(Government share)	4	4
(iv) Working capital	1.074	1,205
(v) Sale of agricultural produce	2,290	
(vi) Sale of agrl. inputs		
(a) Fertilisers	204	N.A.
(b) Others	463	N.A.
(c) Total	667	N.A.
(D) *Milk Supply Cooperatives*		
(i) Primary societies (Number)	37	39
(ii) Membership (Nuumber)	956	1,108
(iii) Share capital	405	415
(iv) Total Sale	3281	3725

Cooperative Societies and Five Year Plans

The Cooperative Movement in Delhi made a good progress after the introduction of planning in 1951. Under the plans, cooperatives were assigned a major role in many economic activities, especially agricultural and allied services. The objective was to make cooperative movement an instrument of planned development. To this effect, the cooperatives were given financial support both at the apex and primary levels to make them active and financially sound.

The cooperative system in the Union Territory has been functioning at two levels. At the apex is the Delhi State Cooperative Bank. It gives financial support to the Coopevative Societies and also functions as land mortgage bank. The Delhi State Marketing and Supply Federation, Delhi State Vegetable and Fruit Growers Marketing Federation, Delhi State Thrift and Credit Cooperative Societies Federation, Delhi State Cooperative Industrial Federation and Delhi Hath Kargha Sangh limited fall in this category. At the national level there are organisations like National Agriculture Cooperative Marketing Federation Ltd.

In 1961, there were 2,000 primary societies with 1,76,288 members. The number of the societies and their membership increased to 2,662 and 4,78,558 respectively by 1971. In 1961, out of 2000 primary societies, 509 societies were engaged in various aspects of agricultural development. 369 of these agricultural societies (i.e. 18.45 per cent) with a membership of 32,646 were engaged in providing credit to cultivators. But in sixties the Delhi Administration concentrated more on the consolidation rather than expansion of the Movement. Consequently, the number of agricultural societies decreased from 509 in 1961 to 326 in 1971. Membership of these societies however, increased from 26,462 to 36,338. Likewise the number of agricultural credit societies decreased from 369 in 1961 to 282 in 1971, but their membership increased from 22,646 to 33,4000 in 1971.

During the year 1968–69, 474 rural cooperative societies were functioning in Delhi as against 297 in the previous year. The following table indicates the loans distributed by the cooperative societies during this period.

Year	Membership	(Amount (in lakhs)
1963–64	25,124	49.7
1964–65	25,629	45.9
1965–66	27,111	54.3
1966–67	30,210	61.3
1967–68	21,461	67.0
1968–69	42,044	64.7

(Registrar Cooperative Societies)

According to a survey, average loan received per cultivator from all sources increased to Rs. 769 during 1969-70 from Rs. 244 during 1964-65. Of the total loans received Government cooperative agencies supplied 29 per cent in 1969-70 as compared to 15 per cent during 1967-68 and 40 per cent during 1968-69. The average loan of Rs. 275 received per cultivator through these agencies was highest recorded during the five years. As much as 85 per cent of these loans were utilized for agricultural purposes. Share of loans for agricultural purposes out of the total credit availed of by the farmers from non-institutional sources increased from 61 per cent in 1964-65 to 71 per cent in 1969-70. The tendency of utilising loans for agricultural purposes is an indictor of the increased interest in farming. This is evident from the following table:

Average amount of loan borrowed per cultivator from different agencies

Agency	1964–65	65–66	66–67	67–68	68–69	69–70
1	2	3	4	5	6	7
1. Govt. Cooperatives	34.97	110.19	82.28	78.41	153.66	294.75
2. Others						
(a) Agricultural purposes	128.17	105.52	288.21	300.70	164.68	421.03
(b) Non-agricultural purposes	80.47	32.32	137.40	128.45	65.78	82.09
Total (a+b)	248.21	248.03	507.89	507.89	384.12	708.71
No. of sampled cultivators	480	477	476	477	476	475

(Registrar Cooperative Societies)

Most of the credit requirements of the cultivators are met through Agricultural Credit Cooperative Societies. These societies are members of Delhi State Cooperative Bank Ltd. There were 90 Central Credit Cooperative Societies with a membership of 5,698. The introduction of I.A.D.P. programme in Delhi in 1964 led to greater emphasis on improved agricultural practices. To make this a success a Cooperative Credit Action Programme was introduced in April, 1965. Under this system the amount of loan was determined on the basis of requirements of productive activities by the farmers. The programme was extended to 124 village cooperative societies during 1968. There has been a great response to this programme and consequently consumption of fertilizers has increased considerably.

The Agricultural Credit Cooperative Societies, receive assistance and guidance from the Delhi State Cooperative Board registered in 1921. The Bank now advances long term loans to agriculturists against mortage of land for improvement of land, purchase of tractors, threshers and other farm machinery, installation of tube-wells

and pumping sets etc. Short term and medium term loans are also advanced by the Agriculture Credit Cooperative Societies.

In 1972, there were 2,929 societies with a total membership of 4.06 lakhs. Of these, 278 societies with a membership of 0.37 lakhs and a working capital of Rs. 196.45 lakhs were exclusively engaged in agricultural pursuits. The number of cooperative societies on 30th June, 1976 was 2774. Their membership was 580,330 and the working capital Rs. 1005065 thousand. Of these 277 were primary agricultural societies, thrift and credit societies and multipurpose societies with a total membership of 37905 and a working capital of Rs. 20810 thousand. Five societies engaged in marketing and processing of agricultural produce had a total membership of 2168 and a working capital of Rs. 69,920 thousand. The number of societies dealing in vegetables was 39, including one central apex institution. The number of societies engaged in dairying and milk supply increased from 10 in June, 1975 to 21 in June, 1976. The number of fish marketing societies was two. There were 14 other agricultural societies with membership of 1706 and working capital of Rs. 6.41 lakhs.

During the Fourth Plan, an expenditure of Rs. 68.03 lakhs was incurred on various cooperative schemes. The membership of the cooperative societies increased from 31 thousand to 39 thousand over the plan period. The number of nonviable primary agricultural credit societies decreased from 285 in 1968–69 to 276 during the Fourth Plan period. The target of Rs. 1.50 crores for advancing short, medium and long term loans was achieved in full. There was a shortfall in the advances of short and medium term loans in 1969-70 on account of the damage caused by floods and hailstorm. The payment of previous loans became overdue and further loans could not be advanced. In 1970–71 shortfall was due to the nonavailability of fertilizers.

During the Fifth Plan an outlay of Rs. 140 lakhs was made for the development of various cooperatives. However, the actual expenditure was Rs. 68.03 lakhs in 1974-78 and 27.69 lakhs in 1978–79. The objective was to enable the cooperatives to play an important role in agricultural development and social transformation. With this intent it was decided to re-organise and strengthen the Agricultural Credit and Multipurpose Societies through amalgamation and liquidation. There were 296 Agricultural Credit Cooperative Societies at the end of 1974. This number came down to 200 by 1978. During the Fifth Plan it was planned to re-organise these societies into 100 strong viable units. This could not however, be done due to the opposition from several of the affected societies. Agriculture produce worth Rs. 1.86 crores was marketed through cooperatives during 1974-78. Similarly fertilizers worth Rs. 0.61 crore were retailed against the target of Rs. 0.80 crores. Short and medium term loans amounting to Rs. 2.56 crores and Rs. 0.40 crore respectively were advanced by the primary Agricultural Credit Cooperative Societies.

In the Sixth Plan a sum of Rs. 3.00 crore was provided Agricultural Credit Cooperative Societies for distribution to its members. In 1981 there were 738

rural cooperatives with a membership of 40,404. The share capital of these cooperatives was 26.37 lakhs and the deposits amounted to 20.46 lakhs. 43 weak primary agricultural Credit Cooperative Societies were amalgamated with other societies reducing their number to 157 by the end of 1979. The short term loans amounting to Rs. 60 lakhs were advanced to their members by the Primary Agricultural Cooperative Credit Societies.

A sum of Rs. 794.00 lakhs has been earmarked for Cooperative Sector in the Seventh Five Year Plan (1985-90). The strategy is to accelerate the distribution of short term, medium term and long term loans through Delhi State Cooperative Bank to the agriculturists and to make greater effort to recover overdues. The table below reflects the actual achievements under Sixth Plan and the physical targets approved for the 7th Plan and the Annual Plan 1985-86:

(Rs. in lakhs)

	Physical Targets	Sixth Plan achievements	Seventh Plan Targets	1985–86 Targets
1.	Short term loan advance	257.90	150.00	100.00
2.	Long term loan advance	68.48	35.00	25.00
3	Medium term loan advance	23.00	15.00	10.00
4.	Agricultural produce marketed by Cooperatives	79.03	25.00	10.00
5.	Value of fertilizers retailed by cooperatives	139.10	40.00	20.00

(Seventh Five Year Plan 1980–85, Planning Deptt., Delhi Admn.)

Assistance to Primary Agricultural Credit Societies

To streamline the functioning of Primry Agricultural Credit Societies, the Cooperative Department has been trying to re-organise them for some time. During 1979-80, 16 new primary Agricultural Societies were organised in accordance with the guidelines given by the Reserve Bank of India. These societies are being helped financially-Rs. 1000/– as share capital and Rs. 5,000/– as managerial subsidy. During Sixth Plan (1980–85) an amount of Rs. 2.28 lakhs was given to Primary Agricultural Credit Societies in the form of managerial subsidy.

Assistance to Delhi State Cooperative Bank Limited

The Delhi State Cooperative Bank is an Apex body, responsible for financing the entire cooperative movement in the Union Territory of Delhi. It also functions as land mortgage bank. To improve the financial position of the Bank, recovery cells have been created in the bank as well as in the Cooperative Department. A liquidation cell has also

been set up in the Bank to finalise the cases of liquidated societies and to make maximum recoveries from them. A review committee has been set up to supervise various activities of the Bank. These efforts have led to good results.

The Bank was advanced Rs. 30 lakhs as share capital during 1974-78. As on 30th June 1979 the total share capital of the Bank was Rs. 87.00 lakhs. It was decided to enhance this share capital to Rs. 92 lakhs during 1978-83 with a view to improve the financial position of the Bank. In the Sixth Plan an amount of Rs. 20.2 lakhs was given to the Bank as share capital. In Seventh Five Year Plan a provision of 50 lakhs has been made for this purpose.

The Bank has suffered financially due to mounting overdues which stood at Rs. 2.30 crores on 30th June, 1979. Of these Rs. 111.30 lakhs had already become bad debts. Owing to this the Bank is unable to avail of the facility of short term credit from the Reserve Bank of India. Financial assistance to the Bank in the form of normal bad debt reserve has, therefore, become a necessity. An outlay of Rs. 15 lakhs was made during 1978-79 for this purpose. The Sixth Plan provided Rs. 30 lakhs as subsidy towards the normal bad debt reserve.

The Delhi State Cooperative Bank has been providing loans to the societies for granting advances to the weaker sections of the society. A provision has been made to provide special bad debt reserve subsidy on the excess loans made over the preceding year. An amount of Rs. 4.29 lakhs was provided to the Bank during 1974-78 for this purpose. In 1980-81 rehabilitation assistance amounting to Rs. 17.00 lakhs was provided.

Agricultural Credit Stabilization Fund

The Rural Credit Survey Committee proposed the constitution of Agricultural Credit Stabilization Fund at the Cooperative Bank level to meet the credit requirement of the farmers and others engaged in agricultural pursuits. The funds for the State Cooperative Bank include the profits of the Bank and the assistance from the Government. The Government assistance is 75 per cent loan and 25 per cent subsidy. An outlay of Rs. 20 lakhs was proposed for this fund during the last 4 years of the Sixth Five Year Plan and Rs. 2.25 lakhs for Seventh Five Year Plan.

Cooperative Farming

The use of modern implements, high yielding varieties of seeds and good fertilizers are basic to improved agricultural production. The farmers with small holdings have not been able to make use of all these inputs due to lack of funds. Cooperative farming aims to encourage the farmers with small holdings to organise themselves in cooperative societies so that modern equipment and inputs, necessary for higher production, become available to them. At present, 22 such societies are registered with the Cooperative Department. An amount of Rs. 0.26 lakh was provided to them during 1974-78.

Warehousing and Marketing Cooperatives

Cooperative societies have also been formed to ensure reasonable return to the farmers for their produce. By 1979 the societies had constructed 74 godowns. 3 more were added in 1980 thus raising the storage capacity to 74,000 MT. The societies were given 62½ per cent loan and 37½ per cent subsidy for such ventures.

There are two agricultural marketing cooperative societies in Delhi viz., Narela Cooperative Marketing Society Limited and Shahdara Cooperative Marketing Society Limited. Their activities were augmented by adding to their share capital during the Sixth Plan. There is an approved outlay of Rs. 5.00 lakhs in Seventh Five Year Plan for this purpose.

The Delhi State Cooperative Marketing and Supply Federation, Nangloi has been set up to cater to the needs of the primary agricultural credit societies and marketing societies in respect of seeds, fertilizers, pesticides, agricultural implements etc. Due to paucity of funds, the Nangloi Federation has restricted its operations to the distribution of fertilizers to primary agricultural societies. Efforts are in progress to diversify the activities of the Federation.

Vegetable Cooperatives

The Delhi Vegetable and Fruits Marketing Federation deals with the sale and purchase of fruits and vegetables. The Federation was given financial assistance of Rs. 7 lakhs in 1978–79 for the purchase of trucks, construction of booths etc. This Federation supplies vegetables to 150 shops in different parts of Delhi. More vegetable cooperatives were formed during the Sixth Plan to provide vegetables and fruits to the consumers at reasonable rates. The primary vegetable marketing societies are being assisted with the share capital at the rate of Rs. 3,000 and with managerial subsidy at the rate of Rs. 6,000 per year.

Piggery Cooperatives

The piggery cooperative societies have been formed by scheduled castes and other weaker sections of the society to undertake piggery development. Such societies are now being assisted in share capital and managerial subsidy.

Cooperative Education & Training

The Delhi State Cooperative Union provided technical guidance to more than 6,000 promotors and co-operators during Sixth Plan period. It also organised a Co-operative Congress in 1980–81 and conducted 10 seminars. The following figures indicate the progress of co-operative education programme:

Year	No. of office-bearer classes	Office bearers trained	No. of Mgt. committee member classes	Mgt. comittee members trained
1980–81	3	83	36	637
1981–82	4	104	33	685
1982–83	4	119	55	1,064
1983–84	6	172	54	1,288
1984–85	11	239	36	1,110

The Union is also running Delhi State Co-operative Training Centre, Nangloi. The progress of the Centre during 1984-85 was as follows:

Type of courses	No. of courses	Composition of persons trained			
		Depart-mental	Institu-tional	Private	Total
1. 24 weeks diploma in Junior Basic Course in Cooperation	1	2	45	2	49
2. Short term course (1 to 3 weeks duration)	8	29	208	—	237
		31	253	2	286
As on 31.3.85		191	627	20	838

The Training Centre in collaboration with Nehru Yuvak Kendra (Nangloi & Meerut) and the Government of India also organised a short term National Course on Cooperation from 18th January 1985 to 24th January 1985 at Pusa Agricultural & Research Institute, New Delhi.

Conclusion

The Cooperative movement has not progressed in Delhi in a satisfactory manner owing to various reasons. Amendments in the cooperative rules as suggested by the Committee appointed for the purpose in 1978, have not yet been made by the Administration. Supersession of management of cooperatives which is frequently resorted to should be the last resort. The amalgamation of the Cooperative Department cadre with the other cadres of Delhi Administration in 1968-69 has also harmed the movement. Due to this the efficiency of the Cooperative Department and other cooperative institutions has suffered greatly. The staff of Cooperative Department has failed to provide technical and expert guidance to the societies. Frequent transfer of the Registrar, Cooperative Societies also harms the movement. The term of Registrar should not in any case be less than 3 years to provide continuity in policy and plans.

The system of entrusting audit of cooperative societies with Rs. 5.00 lakhs or more working capital to Chartered Accountants needs to be modified. Only those societies whose turn over is more than Rs. 20 lakhs need be subjected to this excercise. The Registrar could approve a panel of chartered accountants out of which societies may appoint their auditors. The recovery of dues should be made more effective.

The education and training is an essential input for cooperation development. The Delhi Cooperative Societies Act provides for an education fund for the purpose.

To make a success of the movement all persons related to the work of cooperation need necessarily be trained in the fundamentals of the cooperative movement.

The principle of one village one society should be restored. The primary agriculture societies which were brought under liquidation in the process of re-organisation should be revived if economically viable. This will remove the sense of uncertainty amongst the farmers and recoveries will start coming back again.

CHAPTER X

THE PROCESS OF URBANISATION

Urbanisation means the transformation of rural areas into urban owing to rapid industrialisation or shifting of population from rural to urban areas. Economic reasons lie at the root of this change from rural to urban. Naturally, the degree of urbanisation and the level of per capita income are intimately connected.

Urbanisation has been a world-wide phenomenon since the nineteenth century. It has operated at a fast pace in developing countries during the past forty years. A recent study of the urbanisation process in 34 developing countries has revealed an average annual gain of 4.5% in the urban population. In contrast to this, in European countries in the later half of the nineteenth century, a period of fastest urban growth, the average annual gain was on 2.1%.

A study of census reports suggests fast growth of urbanisation in India. During 1971-81, India's total population increased by 25%, the urban population by 46.4% and the rural population by 19.7%. The net increase in urban population during the decade was 50.6% million. In the Delhi Metropolitan Area, comprising Delhi and adjoining towns of Ghaziabad, Faridabad, Ballabhgarh, Gurgaon, Bahadurgarh, Loni and Narela the increase in urban population has been very rapid as shown in the following table:

S.No.	Ring Towns	Growth Rate 1971–81 (Per cent)
1.	Faridabad-Ballabgarh	+169
2.	Ghaziabad	+125
3.	Gurgaon	+ 77
4.	Bahadurgarh	+ 45
5.	Narela	+ 40
6.	Loni	NA
7.	Delhi U.T.	+ 53

The process of urbanisation in Delhi has been analysed under the following heads:

(i) Growth of urban population and migration.

(ii) Spatial expansion and structural changes.

(iii) Socio-economic changes.

(iv) Urbanisation process and planned development.

Growth of Urban Population and Migration

Delhi has the highest growth rate among the four major metropolitan cities of India. The Comparative growth rate as per 1981 Census is given in the following table:

Urban agglomeration city	Population in 1981 (in lakhs)	Growth rate 1971-81 (per cent)
1. Calcutta	92	31
2. Greater Bombay	82	38
3. Delhi (UA)	57	57
4. Madras (UA)	43	35

(Census of India, 1981)

Until 1911, Delhi was a regional town. The Censuses of 1881, 1891 and 1901 show that the growth rate of urban and rural population in Delhi was almost equal as reflected in the following table:

Census year	Percentage of urban population	Percentage of rural population	Annual growth rate of urban population
1881	49	51	1.1
1891	52	48	1.1
1901	51	49	0.8

The change of capital from Calcutta to Delhi in 1912 accelerated the growth of urban Delhi thereby disturbing the balance of population between the rural and urban Delhi. During the last 7 decades, from 1911 to 1981, the increase in the urban population and the decrease in the rural population has been very marked-the urban population increasing from 56% to 93 % and the rural population decreasing from 44% to 7%. The following table gives the comparative figures:

Census year	Percentage of urban population	Percentage of rural population	Annual growth rate of urban population
1911	56	44	—
1921	62	38	2.7
1931	70	30	3.9
1941	76	24	4.5
1951	82	18	7.5
1961	89	11	5.1
1971	90	10	4.5
1981	93	7	4.7

The partition of the country in 1947 led to large scale migration of population to Delhi, so much so that the city recorded a growth rate of 107% in urban population. In fact, population more than doubled during the decade. In the last three decades (1951-81), the growth rate of urban population has been fluctuating between 55% and 65%, a very high rate for any metropolitan city. If the trend continues, the urban population in Delhi at the turn of the century would be more than 14 million.

Migration

According to 1981 census, there were about 23 lakh migrants in Delhi constituting 37% of the total population. The migrants from Uttar Pradesh accounted for the highest number (48.2%) followed by Haryana (13.5%), Punjab (9.8%) and Rajasthan (7.6%). In the case of Madhya Pradesh which sent only 1.2 per cent migrants before 1961, the percentage increased to 3.1% during the last decade.

Flow of Migrants into Delhi

State		Before 1961	1961–71	1971–81	Period not known	Total
Haryana	No.	98,324	85,945	1,59,028	14,412	3,57,709
	%	22.1	16.4	12.9	—	15.5
Madhya Pradesh	No.	5,585	8,860	37,709	2,496	54,650
	%	1.2	1.7	3.1	—	2.4
Punjab	No.	7,49,944	59,503	78,671	11,447	2,24,565
	%	16.8	11.3	6.4	—	9.8
Rajasthan	No.	33,341	39,885	93,885	7,603	1,74665
	%	7.5	7.6	7.6	—	7.6
Uttar Pradesh	No.	1,85,560	2,60,748	6,16,021	45,362	11,07,681
	%	41.7	49.6	50.1	—	48.2
Others excluding outside India	No.	47,3111	70,368	2,44,480	17,823	3,79,982
	%	10.6	13.4	19.9	—	16.5
Total	No.	4,45,055	5,25,309	12,29,745	99,143	22,99,252
	%	19.4	22.8	53.5	—	100.00

(Census of India, 1981)

From the neighbouring States, a large proportion of migrants comes from the rural areas. However, from the remaining states, the proportion of

migrants from urban areas is much higher, i.e. about 64%, as detailed in the following table:

States	Total	Rural	Urban
Uttar Pradesh	No. 11,07,680	6,68,916	4,36,091
	% —	60.4	39.6
Haryana	No. 3,57,709	2,15,739	1,41,143
	%	60.5	39.5
Rajasthan	No. 1,74,663	1,09,187	63,939
	% —	63.4	36.6
Other States	No. 6,59,197	2,34,665	4,17,170
Punjab	%	36.0	64.0

A socio-economic study conducted by the Perspective Planning Wing (PPW) of the Delhi Development Authority indicated that some of the developed districts of the neighbouring states were contributing major proportion of migrants. The number of migrants coming from different districts of these states is given in the following table in a descending order:

State	Name of the District				
Uttar Pradesh	Meerut: 8.33	Bullandshahar: 6.68	Aligarh: 5.69	Agra: 2.67	
	Ghaziabad: 2.59	Garhwal: 2.30	Muzzafarnagar: 1.70	Almora: 1.70	
	Mathura: 1.49	Muradabad: 1.43	Kanpur: 1.41	Etah: 1.29	Gonda: 1.03
	Saharanpur: 1.29	Lucknow: 1.25	Azamgarh: 1.23		
Haryana	Rohtak: 3.74	Sonepat: 2.16	Gurgaon: 2.16	Karnal: 1.62	Faridabad: 0.91
Punjab	Amritsar: 2.29	Jullundur: 1.70	Ludhiana: 1.45	Hoshiarpur: 1.13	
Rajasthan	Jaipur: 2.08	Alwar: 1.11			

(Socio-Economic Unit, PPW, 1980–81, D.D.A.)

In the last two decades, the annual migrations to Delhi have registered a three fold increase. The position obtaining in the last two decades is given in the following table:

S.No.	Period	Total migrants	Total No. of years	Average per year
1.	1980–81	1,72,957	1	1,72,957
2.	1976–80	6,16,157	4	1,54,039
3.	1971–75	4,40,630	5	88,126
4.	1962–70	5,25,309	9	58,368

(Census of India 1981)

Compared to natural growth (birth-death), migration has contributed much more to the population as detailed in the following table:

S.No.	Period	Addition in population Natural increase	(in lakhs) Migration	Ratio
1.	1980–81	1,23,268	1,72,957	1:1.4
2.	1976–80	3,83,323	6,16,157	1:1.6
3.	1971–75	3,88,804	4,40,630	1:1.1

(Census of India, 1981,

Causes of migration

The two main causes of migration are unemployment and family movement. These causes are, however, closely inter-related as the unemployment results in family movement. The causes of migration in respect of various states are illustrated in the following table:

S. No.	State Migrants in lakhs	Employment	Family movement
1	Haryana	0.36	0.60
2.	Madhya Pradesh	0.14	0.01
3.	Punjab	0.16	0.36
4.	Rajasthan	0.32	0.40
5.	Uttar Pradesh	2.31	2.37

The migrants enter different sectors of employment almost in the same proportion as the local workers of Delhi. The following table gives the comparative percentage of migrant workers and local workers in different sectors of employment.

Sectors	Percentage of migrants workers	Percentage of local workers
Primary	2.00	5.0
Secondary	28.09	29.0
Teritary	69.01	66.0
Total	100.00	100.0

(Census of India, 1971)

Spatial Expansion and Structural Changes

Rapid process of urbanisation is normally accompanied by spatial expansion. Prior to 1911 the growth of urban population in Delhi was not matched by any increase in the urban area but thereafter the increase in the urban area has been phenomenal. This is borne out by the following table:

Year	Area in sq. km.	Decade increase in sq. kms.	Decadal rate of growth in per centage
1881	43.25	—	—
1891	—	—	—
1901	—	—	—
1911	—	—	—
1921	168.09	142.84	—
1931	169.44	1.55	0.922
1941	174.31	4.67	2.75
1951	195.54	21.23	12.17
1961	326.34	130.80	66.89
1971	446.30	119.89	36.76
1981	540.74	94.44	21.16

Also see PL. 2.1, 2

During the last one hundred years, the urban area recorded a 13 fold increase while the population increased by 34 times. The annual rate of growth of urban population and urban area is shown in the following table:

Census Year	Rate of growth of urban population (in percentage)	Average expansion of urban area (in percentage)
1921	2.71	—
1931	3.92	0.09
1941	4.51	0.27
1951	7.52	1.28
1961	5.08	6.69
1971	4.45	3.68
1981	4.69	2.12

Villages and the Urban Expansion

The process of urbanisation has devoured a number of villages through the decades. Prior to 1911 census, no information is available on this score. The position in 1921 is, however, indicated in the records of the Census of villages of Delhi. There were 314 inhabited villages in 1921. By 1931, 25 villages out of a total of 381 revenue

villages had been incorporated within the urban limits. Break-up of 381 revenue villages is given below:

(i)	Inhabited villages	307
(ii)	Uninhabited villages (only revenue estates)	49
(iii)	Villages merged into urban area	25
	Total	381

Break-up of 25 villages which were merged into urban area was as follows:

(i)	Included in Delhi city	18
(ii)	Included in New Delhi city	6
(iii)	Included in Shahdara town	1
	Total	25

Out of 162 villages urbanised so far, many including the above 25 villages have totally lost their identity. Six of the villages were shifted during the establishment of the Capital in New Delhi. During the periods 1931-51, 1951-61, 1961-71 and 1971-81, 22, 48, 40 and 27 villages respectively became urbanised in different parts of the city. (See Appendix and PL 3).

Direction of Urbanisation

Prior to 1931, urbanisation in Delhi progressed in the northern and western parts of the walled city. Urban growth south of Shahjahanabad started with the foundation of New Delhi. 6 villages were incorporated in the urban area for this purpose. From 1931 to 1951, owing to rapid industrialisation, 22 villages got merged into urban area. During 1951-61, 26 villages were urbanised in south and west Delhi to build houses for displaced persons from Pakistan.

The urbanisation of villages in the Trans-Yamuna area started late because of limited accessibility. After the opening of Indraprastha bridge, the area has become accessible. During 1969-81, almost all the villages south of Wazirabad road have been urbanised. 27 villages were urbanised during this period.

Structural Changes

The process of assimilating rural areas has brought about significant changes in the spatial profile of the city. The physical growth of Delhi started with the foundation of Shahjahanabad, in 1648 A.D. The proper city covered hardly a radius of 5 kms. and all around it there were small settlements. Upto 1857, the city continued to grow within the walls and rural areas were not disturbed. In 1857, after the suppression of the uprising, the British cleared the whole area from Red Fort to Jama

Masjid for military reasons. The people who lost their houses in the process migrated to settle outside the walled city. That was the first time when the city started expanding outside the walls into rural hinterland.

In 1911, the shifting of the capital to Delhi brought about major structural changes in the city. To begin with, large tracts of rural land were acquired to develop a new township in the Civil Lines area for military and administrative purposes. Paharganj in the west and Subzi Mandi in the north developed as shelters to the poor. Subsequently, when a site was selected for the new capital near Raisina Hills to the south of the walled city, 6 villages were acquired. The whole area was converted into a garden city measuring over 1,295 hactares and planned for a projected population of 65,000. Towards the north of the new capital site, a few more villages were acquired for housing the military cantonment.

Another factor which brought fast structural changes in the spatial configuration of the city was the partition of the country in 1947. The rehabilitation of a large number of displaced persons from Pakistan was not possible without acquiring rural lands. In the South the agricultural land of Nizamuddin, Ghari, Zamrudpur, Hauz Rani and Begam Pur villages was acquired to build the rehabilitation colonies of Lajpat Nagar, Kalkaji, Malaviya Nagar and Nizamuddin. In the west, agricultural land of Shadipur, Basaidara Pur, Tatarpur and Khampur Raya villages was acquired to build the new colonies of Rajinder Nagar, Patel Nagar, Moti Nagar, Ramesh Nagar and Tilak Nagar. Kingsway Camp in the North and Gandhi Nagar in the East were built on the agricultural land acquired from the villages of Dhaka Malikpur and Seelampur respectively.

The laying of new railway lines and roads also brought changes in the structure of the city. The rail connection with Calcutta (1867), Bombay (1873), Karnal and Ambala (1891) and Moradabad (1897) brought about urbanisation along these railway lines. The laying of railway lines and building of railway stations necessitiated the acquisition of large areas between Chandni Chowk and Kashmere Gate. The construction of ring road in 1956 opened up new areas for development in the periphery of the city. Thus owing to urban expansion and structural changes, the ruins of the historic cities of Indraprastha, Qila Rai Pithora, Tughlakabad, Siri, Jahanpanaha were joined together with Shahjahanabad and New Delhi to form a major urban conglomeration.

Socio-Economic Changes

In the process of urbanisation, the villages of Delhi have undergone considerable socio-economic changes. Of 115 villages urbanised between 1951 and 1981, data from the 1971 Census have been analysed for 113 villages. Area definitions used for this analysis are :

(i) Rural Delhi, integration of population of all the rural villages as per Census;

(ii) Urban Delhi, the urban population as per Census excluding 113 urbanised villages.

(iii) Urbanised villages, the population of 113 villages urbanised from 1951 to 1981.

Participation Rate

Participation rate is the ratio of the number of workers to the total population in percentage terms. The urban villages indicate a higher participation rate than the rural but lower than that of urban. This suggests that during the process of urbanisation, the participation rate for a village increases. As per the 1971 Census, the participation rate for rural Delhi was 26.6%, for urbanised villages 28.4% and for urban Delhi 30.6%.

Economic Activities

As expected, owing to urbanisation the industrial structure of the villages changed. There was an appreciable fall in the number of workers engaged in agriculture while the number of workers in other occupations such as manufacturing, construction, trade and commerce and transport showed an increase. In construction work the proportion of workers increased from 3.2% to 7.9% and in trade and commerce, from 4.4% to 10.7% of the total working force as shown below:

		Rural Delhi	Urbanised Delhi	Urban Delhi
Agriculture	No.	42,986	12,089	17,870
	%	18.6	14.0	1.5
Manufacturing	No.	23,745	22,376	2,67,840
	%	21.3	26.3	24.0
Construction	No.	3,621	6,863	61,517
	%	3.2	7.9	5.5
Trade & Commerce	No.	4,878	9,268	2,39,719
	%	4.4	10.7	21.5
Transportation	No.	7,652	8,728	1,07,324
	%	6.9	10.0	9.6
Other Services	No.	28,578	26,991	4,22,667
	%	25.6	31.1	37.9

(Census of India, 1971)

Sex Ratio

With growing urbanisation, there appears a reduction in the sex ratio indicative of the fact that migrant population is entering the urbanised villages for want of accommodation:

Sex Ratio-Delhi (1951–71)

Year	Sex Ratio (figures per 1000 males)		
	Rural Delhi	Urbanised	Urban Delhi
1951	837	762	754
1961	847	791	777
1971	825	793	798

(District Census Hand Book 1951, 61, 71)

Age Structure

Owing to urbanisation, there is a proportionately lesser population of children in the age group 0-14, a higher population of adults in the age group 15-60 and lower population of old persons in the age group above 60 years as shown in the following table:

	Rural Delhi	Urban Delhi
Children	44.9%	37.9%
Adult (male)	27.7%	33.3%
Adult (female)	22.5%	24.6%
Old Persons	4.9%	4.2%

(General Population Table 1971, Series 27 Part-I, Delhi)

Urbanisation and Planned Development of Delhi

In the late fifties and early sixties, detailed studies on urbanisation were conducted with a view to prepare a Master Plan for the development of Delhi and its environs. When the Plan was enforced in 1962, the developed urbanised area in Delhi was about 18,000 hectares. Another 26,000 hectare area was proposed for acquisition and development. This brought 112 villages within the new urbanisation limits as indicated in the Master Plan. The Master Plan policy was 'large scale acquisition, development and disposal of land.'

As a result of this, about 20,000 hectares of land was acquired during the last two decades. The Delhi Development Authority has undertaken a programme of comprehensive land development and housing. About 8,500 hectares of land has been utilised for development of residential accommodation. Of this 34.1% has been provided for the resettlement of the economically weaker sections, 16.9% for co-

operative plotted housing, 4.7% for co-operative group housing, 18.5% for the low and middle income groups under the Delhi Development Authority housing scheme, 16.1% for the Rohini Housing Project and 9.7% for the Delhi Development Authority plotted development for high, middle and low income groups. Resettlement of about two lakh squatter families and large scale social housing has been a major feature of the policy. One negative aspect which could be partially attributed to this policy is the growth of numerous unauthorised colonies. As many as two lakh families are residing in these unauthorised areas.

As a result of large scale acquisitions, the villages have undergone a physical and socio-economic transformation. In the process of urbanisation, the agricultural land of the village was left out for secondary dwellings, ghityers and public buildings. This private land in most of the villages has been put to use as single family tenements or for operating small industrial units and retail shops. Thus in the process although the inner zone of the villages, comprising compact old houses and a homogenous community has remained almost intact, the outer zone has completely changed and has acquired a heterogeneous character.

With a view to properly channalise the urban growth, the Master Plan for Delhi brought forward the concept of National Capital Region. The intention was to develop small and medium size towns in the National Capital Region to reduce the rate of growth of urban population in Delhi. In 1985, the National Capital Region Planning Board Act was passed. The Act provides for the constitution of a Planning Board for the preparation of a plan for the development of the National Capital Region and for coordinating and monitoring the implementation of such plan and for evolving consistent policies for the control of land uses and development of infrastructure in the National Capital Region so as to avoid any haphazard development of that region and for matters connected therewith or incidental thereto. The National Capital Region as delineated under this act comprises the whole of Union Territory of Delhi, the districts of Gurgaon, Faridabad, Rohtak, Karnal, Sonepat, Panipat and Riwari in Haryana, the districts of Bulandshahar, Meerut and Ghaziabad in U.P. and the Behroor, Mandawar, Kishangarh and Tijara and Alwar districts in Rajasthan.

APPENDIX

List I : Villages urbanised prior to 1951[1]

1. Shahdara
2. Naraina
3. New Cantt.
4. Todapur
5. Najafgarh
6. Nangal Raya
7. Civil Station
8. Delhi
9. Dakka
10. Rajpur Cantt.
11. Timarpur
12. Malikpur Cantt.
13. Arakpur alias Bagh Mochi
14. Imperial Delhi
15. Razapur Nangli
16. Southern Ridge
17. Yusuf Sarai
18. Ali Ganj
19. Behlolpur Khadar
20. Inderpet
21. Pachera
22. Rajpur Khurd

1: Census of India. *District Census Hand Book, Delhi* 1961, Volume XIX.

List II : Villages urbanised between 1951-61[1]

1. Oldan Pur
2. Khureji Khas
3. Saqdar Pur
4. Seelampur
5. Karkar Dooman
6. Azadpur
7. Ghondli
8. Basti Darapur
9. Shakur pur
10. Shadipur
11. Khampur
12. Hauz Khas
13. Kumayun Pur
14. Masjid Moth
15. Mubarakpur Kotla
16. Sarai Kale Khan
17. Zamrud Pur
18. Chiragh Delhi
19. Garhi Jharia Maria
20. Khirki
21. Toot Sarai
22. Sheikh Sarai
23. Kalu Sarai
24. Shahpur Jat
25. Kharera
26. Begumpur
27. Jia Sarai
28. Adhchini
29. Nangli Razapur
30. Joga Bai
31. Basant Nagar
32. Mohd. Pur Munirka
33. Khizrabad
34. Okhla
35. Chackchilla
36. Kilokri
37. Kesopur
38. Chaukhandi
39. Madipur
40. Khyala
41. Nangli Jalab
42. Tihar
43. Tatarpur
44. Yaqutpur
45. Bahapur
46. Sarai Shahji
47. Asalatpur
48. Posangipur

1: *District Census Hand Book-Delhi* 1961

List III : Villages urbanised between 1961-71.[1]

1. Seelampur Mazra, Madipur
2. Khichripur
3. Shakarpur Khas
4. Mandoli Fazal Pur
5. Gazipur
6. Hasanpur
7. Ghonda Chauhan Bangar
8. Ghonda Gujran Khadar
9. Ghonda Chauhan Khadar
10. Ganwari Ghonda
11. Naya Gaon
12. Usman Pur
13. Mauj Pur
14. Saboli
15. Jhilmil Tahar Pur
16. Budhela
17. Masudabad
18. Haibat Pur
19. Bair Sarai
20. Katwaria Sarai
21. Hauz Rani
22. Khan Pur
23. Madangir
24. Tughlakabad
25. Tekhand
26. Jasola
27. Madanpur Khadar
28. Badarpur
29. Lado Sarai
30. Chiragh Shimali (Kaitwara)
31. Krishangarh alias Chhan
32. Neemri
33. Sadhora Kalan
34. Sadhora Khurd
35. Dahir Pur
36. Wazirpur
37. Pipal Thala
38. Bharola
39. Chaukri Mubarakpur

I. Census 1971 *General Population Tables-Series* 27, *Delhi* 1971

List IV : Villages urbanised between 1971-81.[1]

1. Kotla
2. Mandoli
3. Babarpur
4. Jaffrabad
5. Gokalpur
6. Nangloi Jat
7. Palam
8. Nasirpur
9. Nangloi Sayed
10. Bindapur
11. Roshan Pur alias Dichoan Khurd
12. Bijwasan
13. Sultanpur Majra
14. Samepur
15. Bawana
16. Pooth Khurd
17. Alipur
18. Pehlad Pur Bangar
19. Bhalswa Jahangirpur (Resettlement)
20. Tigri
21. Pul Pehlad
22. Mahipal Pur
23. Chatter Pur
24. Lado Sarai
25. Deoli
26. Rajokri
27. Molarband

I: *Census of India* 1981 *Series* 28, *Delhi*.

CHAPTER XI

TRANSPORT AND COMMUNICATION

Beginning with the Mahabharata age Delhi has enjoyed the status of the capital city of India for fairly long stretches in history. It has, therefore, always enjoyed close transport links with all parts of the Indian sub-continent. The city by virtue of its position as the capital has also enjoyed a viable road system throughout its long history. But the rural areas do not appear to have received adequate attention from the rulers, who often came from outside as invaders.

With the change of the capital from Calcutta to Delhi in 1912 the transport system of Delhi attracted greater attention. In 1912, 38 miles of Grand Trunk Road, 16 miles of Delhi Rohtak Road, 18 miles of Delhi Gurgaon Road and 32 miles of Delhi Agra Road were metalled. These inter-state roads benefitted the rural areas too. Unmetalled roads branching off from Delhi to Sonepat, Bawana, Najafgarh, Mehrauli and Ballabhgarh served the rural Delhi in a good measure. The canal roads also provided a convenient link between the villages.

After Independence new roads were built and many old roads metalled in rural Delhi. The state of road transport in 1971 is described in the Delhi District Census Handbook (1971) as follows:

"The villages in the Union Territory are easily accessible as a net work of highways, major roads and other roads criss-cross the rural area. In all 49 villages are connected by rail and 19 villages by road. There are only 98 villages which are connected by *kuchha* road. These *Kuchha* roads are quite small in length and are in fact only approach roads to the main roads. According to the development programme, it is expected that these *kuchha* roads would be converted into *pucca* very soon. Almost all the villages in Delhi can be reached through Delhi Transport Corporation or private bus services Bullock Carts and *rehras* frequently ply between the rural and urban areas, transporting the agricultural produce from villages to the urban market. Tempo and trucks are also in frequent use. A very large number of rural population uses bicycles as a means of tranport for coming to the city and back to their villages." The Hand book gives the table on the accessibility of villages by road and railway.

Distribution of villages according to communication facility

Distance from the nearest town	Total No. of villages	No. of villages connected by					Others
		Pucca road	Kuchha road river	Pucca road & rail	Pucca road & rail	Kuccha road & rail	
5 Kms or less	—	—	—	—	—	—	—
6–10 Kms	15	12	8	—	1	2	—
11–15 Kms	34	26	12	—	6	5	—
16–25 Kms	111	91	35	—	27	10	—
26–50 Kms	58	49	33	—	5	2	—
51–100 Kms	—	—	—	—	—	—	—
101–200 Kms	—	—	—	—	—	..	—
201 & above	—	-	—	—	—	—	—
Distance not known	40	17	10	—	4	1	—
Total	258	195	98	—	43	20	—

As per the census of 1981 the rural Delhi comprises an area of 891.2 square kms. and a population of 4,52, 206. It is served by the Municipal Corporation of Delhi whose jurisdiction extends to the rural areas as well. It is again important that in Delhi the rural population is far below than the urban (62,20,406). With rapid urbanisation the number of rural villages has been declining whereas the number of urbanised villages has been gradually increasing.

For the purpose of administration rural Delhi is divided into five Blocks viz. Mehrauli, Alipur, Kanjhawala, Shahdara and Najafgarh. These Blocks are on the periphery of urban Delhi and are well connected with the adjoining provinces of Uttar Pradesh and Haryana. Rural areas of Delhi are linked with each other and with the city proper through a network of roads.

The construction of roads in rural Delhi is primarily the responsibility of the Municipal Corporation of Delhi. But some selected roads are also assigned to the Public Works Department of the Delhi Administration. A minimum programme for the development of roads in rural Delhi has been formulated and funds made available to PWD under various Five Year Plans. The less important roads within the villages are built and maintained by the *Gram Sabhas.*

Types of Roads

Rural Delhi is served by three types of roads viz. (1) black top bitumen (2) water bound macadam and (3) *Kachha*. The roads which connect the rural area with the city are generally *paccka* of the first two types. These roads are used by Delhi

Transport Corporation buses, private buses, jeeps, trucks, tractors, cars, motor cycles, scooters and bicycles etc. *Kaccha* roads connect various parts of the village with the agricultural land. These are used by the farmers for their tractors and carts.

Nationals Highways:—National highways passing through Delhi also connect Delhi villages with each other and with the city. There are five national highways passing through Delhi.

1. *National Highway No.* 1 — Delhi, Panipat, Ambala, Jallander, Amritsar.
2. *National Highway No.* 2 — Delhi, Mathura, Agra, Kanpur, Allahabad, Varanasi, Mohanbari, Calcutta.
3. *National Highway No.* 3 — Delhi, Gurgaon, Jaipur, Ajmer, Udaipur, Ahmedabad, Baroda, Bombay.
4. *National Highway No.* 10 — Delhi, Rohtak
5. *National Highway No.* 24 — Delhi, Lucknow.

Ring Road:—The Ring Road, as the name indicates, was meant to provide fast and smooth transport facility away from the congested areas. With the great expansion of the city, it now hardly serves the intended purpose. It is, however, still the vital link between various parts of the city. The important bus stops on ring road which meet the needs of rural Delhi are Azadpur, Ashram, Safdarjang, Dhaula Kuan, Raja Garden and Punjabi Bagh.

Outer Ring Road:—In order to avoid congestion of the city, the Delhi Master Plan provides for an Outer Ring Road encircling the semi-urbanised and rural areas of the Union Territory. This road provides better transport facilities to the rural area as it covers a large part of rural Delhi. The capital city is linked with the neighbouring rural towns by the following roads:-

1. Najafgarh-Delhi Road
2. Narela-Delhi Road
3. Mehrauli-Delhi Road

Modes of Transport: The transport system of rural Delhi can be classified into two categories viz. slow moving and fast moving. Animals like camels, donkeys, bullocks, buffaloes and horses are widely used for transporting goods from one place to another. The primary agricultural produce whatever its ultimate destination or method of transport almost invariably travels by cart in the first stage of journey. Bullock-carts and buffalo-carts play an important role in this. The importance of animal drawn carts was underlined in a survey of the goods traffic in Delhi, conducted by the Ministry of Transport and Shipping in 1957. According to the survey, out of 12,000 carts distributed all over Delhi, agricultural carts used in Delhi, villages numbered 8, 353. The number of industrial carts was only 3,000 and this suggests the importance of carts in village economy.

Horse driven carriages for passenger traffic are also in vogue in Delhi villages. Their number is, however, gradually coming down with the increasing popularity of modern means of transport. Horse-driven *rehras* are, however, quite popular for carrying goods from and to villages.

Bicycle is the most popular means of transport in rural Delhi. The hawkers, milk vendors, vegetable sellers, office goers, students and teachers all go about their business on bicycle.

Cycle rickshaw is generally used for carrying persons from one place to another. It is not, however, used for long distance journeys.

Among the fast moving modes of transport in use in rural Delhi mention can be made of scooters, motor cycles, tractors, trucks, tempos, three wheelers, motor rickshaws and buses. Scooters and motor cycles are gradually replacing the bicycle. Milk vendors can often be seen carrying milk for sale to the city on their motor cycles.

The bullock cart is gradually being replaced by tractors, tempos and trucks. Rich farmers necessarily maintain a tractor which besides tilling the field is also used to transport the produce to the city *mandis*. The trolly thus used for carrying goods is also used to transport people occasionally. The tempos because of their small size and fitness to move about the village lanes is also widely used to transport agricultural produce and vegetables to the city centres. In this way, it has replaced the cart and *rehras*. Trucks are still not very popular in the villages. Some rich villagers also maintain jeeps and cars. Buses, however, provide the most convenient and cheap mode of transport to the people of rural Delhi. In the beginning, it was the privately operated buses which carried villagers to and from the city. But the Delhi Transport Corporation has now entered the field in a big way and there is hardly any village left which is not connected with the city by one or the other of the Corporation bus routes. The extent of the traffic can be judged from the fact that in 1971 there were as many as 93 rural routes in Delhi and these covered about 500 stops.

By early 1986, the number of rural routes had gone upto 152. In all 453 buses ply on these routes every day with an average of 3 buses per route. The highest number of buses i.e. eleven, ply on route No. 114 (Fatehpuri-Qutab Garh) and the same number on route No. 770 (Ambedkar Stadium-Palam Village). Ten buses each ply on route Nos 106 (Fatehpuri-Qutab Garh), 131 (Fatehpuri-Lampur) and 790 (Ambedkar Stadium-Najafgarh) only one bus each plies on 38 routes. There are 65 bus routes in northern region and 60 in western region Eastern and southern regions have 14 and 13 routes respectively (See PL. 4) The details of the routes are given in the chart below:

North Zone

SNo.	Route No	From	To	Buses
1.	105	I.S.B.T./G.T.B. Nagar	Burari Village	3
2.	106	Fatehpur	Qutab Garh	10

3.	107	–do–	Katwaria Village	2
4.	109	–do–	Bankner	2
5.	112	–do–	Shaffiabad Border	1
6.	113	–do–	Sanoth Village	1
7.	114	–do–	Qutab Garh	11
8.	119	–do–	Bazid Pur	3
9.	120	Kendriya Terminal	Alipur/Narela	—
10.	123	Fateh Puri	Harevli Village	2
11.	124	–do–	Mukhmel Pur	2
12.	125	–do–	Palla	7
13.	126	–do–	Badli Village	6
14.	127	–do–	Haider Pur	8
15.	128	Mori Gate Terminal	Khera Khurd	4
16.	129	Fateh Puri	Jhingola	2
17.	130	Kendriya Terminal	Bawana	—
18.	131	Fateh Puri	Lam Pur Border	10
19.	133	–do–	Narela	6
20.	134	I.S.B.T.	Ibrahim Pur	2
21.	135	Shahid Bhagat Singh Terminal	Narela	6
22.	136	Fateh Puri	Ghoga/Sanoth	4
23.	137	–do–	Holumbi Kalan	5
24.	138	–do–	Hamid Pur	1
25.	140	Kendriya Terminal	Kanjhawala	—
26.	141	Fateh Puri	Rithala	2
27.	143	–do–	Kurent	1
28.	144	–do–	Singhu School	2
29.	146	–do–	Hiranki Village	1
30.	147	–do–	Tiggi Pur Village	2
31.	148	–do–	Tikkri Khurd	1
32.	149	–do–	Taj Pur	1
33.	161	–do–	Sultan Pur Dabas	1
34.	162	–do–	Bakhtawarpur	1
35.	165	I.S.B.T.	Sammey Pur	4
36.	174	Railway Station	Kanjhawala	1
37.	175	–do–	Lam Pur	2
38.	176	–do–	Palla/Hiranki	3
39.	177	–do–	Auchandi Village	3
40.	178	–do–	Narela	1
41.	179	Railway Station	Holambi Kalan	2
42.	182	–do–	Rithala	1
43.	187	Palika Kendra	Siras Pur	7

44.	188	Kendriya Terminal	Qutab Garh	4
45.	191	Mori Gate Terminal	Singhu Border	1
46.	192	I.S.B.T.	Nathu Pura	2
47.	193	Mori Gate Terminal	Khan Pur	1
48.	194	-do-	Bakauli Temple	1
49.	195	Railway Station	Saraspur	2
50.	198	Azad Pur	Haider Pur	1
51.	199	New Delhi Railway Station	Yadav Nagar	2
52.	915	Punjabi Bagh Terminal	Kanjhawala	2
53.	921	Fateh Puri	Rani Khera	2
54.	924	-do-	Majra Dabas	4
55.	926	-do-	Tikkri Border	5
56.	927	Punjabi Bagh Terminal	Bawana	2
57.	928	Railway Station	Garhi Randhalla	4
58.	929	-do-	Mubarak Pur Dabas	3
59.	935	Azad Pur	Majra Dabas	3
60.	938	-do-	Tikkri Border	2
61.	941	Railway Station	Qutab Garh	3
62.	948	Azad Pur	Kanjhawala	—
63.	977	Punjabi Bagh Terminal	Narela	1
64.	Krishak	Qutab Garh	Qutab Garh	6
65.	Gramin	Narela	Narela	4
			Total	189

East Region

1.	2	Shahdara	Loni Border	6
2.	227	Railway Station	Karawal Nagar	3
3.	270	Kendriya Terminal	-do-	3
4.	271	Shivaji Stadium	Jagatpur Village	2
5.	301	Red Fort	Kondli	5
6.	321	Mondoli Village	Chilla Village	6
7.	405	Railway Station	Badar Pur Border	9
8.	404	-do-	Madan Pur Khadar	3
9.	409	-do-	Mollar Bandh School	2
10.	438	Mori Gate Terminal	Jaitpur	2
11.	451	Jantar Mantar	Jaitpur	2
12.	452	Mori Gate Terminal	Madan Pur Khadar	2
13.	415	Lajpat Nagar	Badarpur Border	8
14.	714	Badarpur	Harijan Basti	3
			Total	56

South Region

1.	423	Mori Gàte Terminal	Deoli Village	6
2.	461	Railway Station	Ali Village	1
3.	509	S. Jang Terminal	Madan Garhi	2
4.	516	-do-	Dera Village	8
5.	517	-do-	Ayya Nagar	3
6.	519	-do-	Mandi Village	7
7.	523	Mehrauli	Bhagirath Nagar	2
8.	525	Mori Gate Terminal	Ayya Nagar	4
9.	437	A.I.I.M.S.	Rang Puri	1
10.	539	Mehrauli	Nangloi	1
11.	581	Kendriya Terminal	Deoli Village	2
12.	590	Jantar Mantar	Chhattarpur	—
13.	712	Chankiya Puri Terminal	Kapas Hera	5
			Total	42

West Region

1.	578	A.I.I.M.S.	Najafgarh	2
2.	701	Narela	Najafgarh	7
3.	707	Chankya Puri Terminal	Najar Pur	1
4.	708	Narela	Najafgarh	1
5.	713	Chankya Puri	Nasir Pur	1
6.	715	Mehrauli	Mangol Puri	1
7.	716	Chankya Puri	Dhulsiash	2
8.	717	Mori Gate Terminal	Nangal Dairy	3
9.	719	Chankya Puri Terminal	Pandwla Kalan	1
10.	721	I.S.B.T.	Mangla Puri	4
11.	722	Ambedkar Stadium	Badu Sarai	3
12.	723	Kendriya Terminal	Sagar Puri	1
13.	727	J.L.N. Stadium	Palam Village	7
14.	731	Railway Station	Pochan Pur	1
15.	732	Mori Gate Terminal	Palam Village	2
16.	745	Chankya Puri Terminal	Daulat Pur	1
17.	752	Mori Gate Terminal	Kakrola Village	3
18.	770	Ambedkar Stadium	Palam Village	17
19.	771	Chankya Puri Terminal	Amrohi Village	2
20.	772	-do-	Shahbad Mohmad Pur	1
21.	773	Ambedkar Stadium	Bhartha'	2
22.	774	Chanakya Puri Terminal	I.O.C. Terminal	1
23.	781	Super Bazar	Palam Village	3
24.	790	Ambedkar Stadium	Najafgarh	10

25.	791	Railway Station	Najafgarh Rawta	5
26.	801	Karam Pura Terminal	Shahbad Mohmadpur	3
27.	806	-do-	Paprawat Village	2
28.	809	Tilak Nagar	Neelwal Village	1
29.	814	Paharganj Police Station	Khajala Village	5
30.	818	Kashmere Gate	Jhatikran	2
31.	819	Tilak Nagar	Pandwala Kalan	3
32.	821	-do-	Jafarpur Kalan	—
33.	822	Koria Bridge/ Tilak Nagar	Issa Pur Temple	2
34.	824	-do-	Kair	3
35.	825	Koria Bridge/Tilak Nagar	Jharoda Kalan	5
36.	826	-do-	Khera Dabar	3
37.	827	-do-	Daurala	6
38.	828	-do-	Galib Pur	7
39.	829	Tilak Nagar	Shikarpur	2
40.	833	Karam Pura Terminal	Goela Tajpur	4
41.	834	Najafgarh	Nana Heri	2
42.	835	Koria Bridge/Tilak Nagar	Dhansa Border	5
43.	836	-do-	Mundhela Kalan	4
44.	839	Koria Bridge	Hastsal Village	1
45.	844	Najafgarh	Sarang Pur	1
46.	845	Tilak Nagar	Daulat Pur	1
47.	848	-do-	Bakar Garh Border	1
48.	868	Karampura Terminal	Kakrola Village	1
49.	872	Tilak Nagar	Surakh Pur	1
50.	885	-do-	Rewla Kahanpur	1
51.	922	Railway Station	Najaf Garh	3
52.	923	-do-	-do-	2
53.	925	-do-	Nilothi Village	2
54.	931	Punjabi Bagh Terminal	Bakar Wala	2
55.	934	-do-	Neelwal Village	1
56.	942	Railway Station	Kair/Jharoda Kalan	2
57.	949	Ambedkar Stadium	Nangloi Syad	2
58.	960	Kendriya Terminal	-do-	4
59.	968	Punjabi Bagh Terminal	Dhansa Village	1
60.	F-7	Chankya Puri Terminal	Palam Village	3
			Total	166

The Directorate of Transport has undertaken a plan scheme to open a Motor Driving Training School in each rural Block of Delhi. This work is to be completed during the Seventh Plan. This scheme has been taken up with a view to improve the quality of driving in rural Delhi, as also to provide driving training facilities to the people close to their village. The main branch of the Government Motor Driving Training School is already functioning at Loni Road, Shahdara. This caters to the need of rural population of eastern Delhi.

Waterways

The existing ferry boats plying in five different areas are under the control of the Municipal Coopration of Delhi. The areas are Sungrarpur (18 kms from Kashmere Gate) Burai (13 kms), Wazirabad (2 kms), Okhla (16 kms) and Jaitpur (22 kms). The ferry boats at Wazirabad, transport villagers and their merchandise throughout the year. In Jaitpur and other places the boats cannot ply when there is heavy rainfall as also in winter when the river water dries up. The public ferry at Sungrarpur helps movement of villagers not only from the neighbouring villages of Delhi but also from Uttar Pradesh. Milk vendors and dealers in sugar and gur from Uttar Pradesh are frequent users of this ferry service.

The length of the waterway traversed by the ferries is about a kilometre and the average number of passengers per day varies between 100 to 200. The ferries are put to yearly auction. In the financial year 1970-71, the Municipal Corporation earned from the auction a sum of Rs. 4,015 only. With more bridges coming up over the Yamuna, this mode of transport by boat will disappear in not so distant a future.

Postal Services

Prior to independence the postal services in Delhi were controlled by the Post-Master General, Punjab and North West Frontier Circle with headquarters at Lahore. In December, 1947, Delhi was made a Sub-circle or Punjab Circle to meet the needs of the expanding Capital. In July, 1951 Delhi Postal Circle was formed with a view to further improving the services.

The first post office in rural Delhi was opened at Alipur in 1869. The number of post offices continued to grow and in August, 1947 there were 19 post offices in rural Delhi as against 104 in the whole Delhi State. The number of post offices continued to increase under various plans and in the Fourth Plan 34 post offices were envisaged for rural areas. In 1971, besides a large number of sub-post offices, there were 88 post offices located in major villages of the Union Territory. 52 of these were established in the Delhi Tehsil and 36 in the Mehrauli Tehsil. By 1976, the number of post offices had increased to 102. There were, however, no mobile post offices

or night post offices in rural Delhi. The total number of letter boxes was 227. The year wise progress of the post offices in rural Delhi is indicated in the following chart:

Year	Number
1947	19
1951	36
1956	55
1961	78
1966	82
1974	90
1976	102
1980	150

A great effort was thus made in the late seventies to expand postal facilities in rural Delhi. Besides the normal facilities, 28 mobile post offices are functioning in rural Delhi. They provide counter facilities to 69 villages.

Improvement has also been introduced in the delivery system. Upto 1950, village postmen and extra departmental agents did the job. The system has now been greatly improved. For delivery purposes, the whole of Delhi has been divided in 62 zones and a zonal number has been assigned to each delivery post office. Many of these post offices, viz. Alipur, Badarpur, Badli, Bawana, Mehrauli, Najafgarh, Narela are established in rural Delhi. In 1980, the position was that all the 248 villages were receiving daily dak. Each village was provided with a letter box which was cleared every day.

Telegraph

The telegraph service had started in Delhi in 1857. The earliest recorded telegram in the possession of Telegraph Department originated from Delhi during the revolt of 1857. Delhi villages, however, remained deprived of this service for almost one hundred years. Till 1947, there was not a single post office in rural Delhi providing telegraph facility. It was only in 1951 that one village post office started providing this additional facility to the people. By 1971, ten telegraph offices had been established in the villages.

Telephones

The first regular telephone service in Delhi started in 1911. This remained confined to urban areas for the next fifty years. The Commissioning of Shahdara exchange in 1961 brought a breakthrough in this and rural Delhi got 457 lines after this. This number rose to 1,427 by 1966 and 3,522 by 1976. Besides the Shahdara Exchange other exchanges are also extending the facility to rural areas. Many rural post offices also provide the facility of public call offices.

Radio

The broadcasting service started in Delhi on the first January, 1936. In the same year, the rural programme of one hour duration every day was also started. During the Second World War, the AIR was strengthened to meet the requirements of the war. Some programmes were however, meant to cater to the needs of the village folk. Till 1947, the rural programme was broadcast only for one hour every day. In 1951, this was increased by twenty minutes. In 1961, the timings of rural programme were increased to one hour and forty-five minutes. One programme of 30 minutes is put out daily in the evening giving the villagers expert guidance on sowing, seeds, fertilizers and plant care. The programme also includes some items of entertainment.

These programmes meant for the villagers of Delhi, also benefitted the people of adjoining Haryana and Uttar Pradesh States. Talks on health, nutrition, family planning, history, culture, education etc. are also include in this programme.

Weather bulletins are a daily feature of the rural programme and are considered very useful by farmers in deciding the time for sowing, harvesting etc.

Women's Programme

In 1960, a separate programme of 35 minutes duration was introduced for rural women. From 1971, it was made a weekly programme. It included subjects like health, kitchen garden, balanced diet, nutrition, child care, cookery, family planning etc.

The popularity or radio programme is evident from the increase in the number of radio sets in rural Delhi as indicated in the following table:

Year	Number of Sets
1947	355
1951	875
1956	3,000
1961	15,130
1966	1,28,885
1974	1,95,735
1976	2,19,540
1979	3,00,000

The transistor revolution has further popularised the radio programmes in the villages.

Television

Television was introduced in India on August 15, 1959 as a pilot scheme. It was converted into a regular service from January, 1962. Since then the television has

turned into a very powerful medium of mass communication. The number of T.V. Sets is gradually increasing in rural areas. Delhi Doordarshan telecasts a *Krishi Darshan* programme of half an hour's duration on five days in a week. Villagers take keen interest in it and even when there is only one set in a village the people collect around it to see this programme.

These programmes are prepared in consultation with specialists of the Indian Agricultural Research Institute, Directorate of Extension and Development of the Delhi Administration and Agricultural Departments of Haryana and Uttar Pradesh. Participation of farmers is an essential feature of these programmes. These are seen not only in rural Delhi but also in the adjoining districts of Gurgaon, Sonepat, Rohtak, Meerut, Ghaziabad and Bulandshahar.

The number of television sets in rural Delhi has increased over the years as follows:

Year	Sets
1966	135
1974	575
1976	985
1979	2,500

A pilot project on agricultural television was started in January, 1967 and viewing-cum-discussion groups known as Tele Clubs were foremd in about 80 villages of Delhi. Television sets were installed in these villages to diffuse information on agriculture among the farmers. The Doordarshan programmes for villages also include items of entertainment like dances and folk music, apart from useful information about crops, fertilisers, weather etc.

Delhi Doordarshan also puts up special programmes for school students as well as teachers. These are telecast during school hours on certain days in the week. Schools in rural areas have been provided television sets for this purpose.

CHAPTER XII

FREEDOM STRUGGLE[1]

"Delhi had its own importance as the national capital and the seat of a mighty empire. It is here that the national leaders came from time to time to confront the defenders of the empire and the apologists of foreign rule, to negotiate or to demonstrate as the case may be. Delhi, therefore, was constantly electrified by the presence of the highest in the land and was sensitive to every major political happening in the country."[2]

Rural Delhi could not be a silent spectator to the happenings in the national capital. The participation of Delhi villagers in the freedom struggle started with the First War of Indian Independence in 1857. The inhabitants of Chandrawal village, now the site of Old Secretariat, openly revolted against foreign rule. Alipur Village also rose in revolt. In the process as many as seventy people lost their lives. The British declared it a 'rebel village'. Many more villages directly or indirectly participated in this revolt against foreign rule.

When *Swadeshi* movement began in the country, during the early part of this century, Delhi villages became actively involved in it. Freedom Fighters of Delhi often found shelter in the villages to escape the police net. To prevent the villages from becoming hideouts for revolutionaries and freedom fighters as many as 65 villages in the trans-Yamuna area, then forming part of Merrut District, were transferred to Delhi. During the Salt *Satyagraha*, Shahdara and Seelampur were important centres of agitation in Delhi. In the Quit India Movement, many freedom fighters went under ground and found shelter in the villages of Delhi. Narela, Bawana, and Mehrauli were important centres of political activity. Gandhiji himself blessed some of these centres. Swami Swaroopa Nand, Chaudhuri Bihari and Krishna Nayar were important leaders who led to freedom struggle in Delhi villages.

The First War of Indian Independence in Delhi

The Causes

Delhi was the vortex of the great uprising in 1857. Rural Delhi also came into its ambit and many factors contributed to this. The growing British interference in internal affairs of the villages led to the weakening of village *panchayats*. This encouraged British courts on the one hand and anti-Government feeling among the people on the other.[3] People believed that the new system did not impart true justice as the number

1. I am grateful to my husband Mr. D.K. Kaushik for his help in writing this chapter.
2. Thapliyal U.P. : *Who's Who of Delhi Freedom Fighters, Vol. II,* intcoduction P. xxx.
3. Richard Temple - *Memories of My Indian Career,* Vol. I, p. 81.

of witnesses was considered more important in these courts than the quality of justice.[1] Some British Officers disapproved of this policy of interference in the internal affairs of the villages and pleaded in favour of village *Panchayats*[2] but unfortunately these suggestions did not carry conviction with the Government. Consequently the system of village *Panchayat* greatly suffered.[3]

Like other parts of the country rural Delhi also suffered economic exploitation. The task of revenue collection was entrusted to contractors who extracted from the people as much money as possible in the name of tax. Many a time the village headman was arrested and released only after he promised to pay the revenue on behalf of the whole village. The revenue officers enhanced the revenue at the end of every settlement. The village headmen were imprisoned if they refused to accept the terms offered, and having accepted them, they had to furnish security for payment. The collections were made in February and September, long before the harvest, and this added to the distress of the peasants.

After 1840 the price of wheat fell considerably. In 1841, wheat was selling at Rs. 2 per mond. The price came down to Re. 1 in 1856. The slump in the market continued and the increased revenue rates put the farmer in arrears. The custom of forced labour (*begar*) was also a common abuse. Villagers often hid in forests and far off places to escape the *begar*. According to *The Englishman*, they were forced to do it.[4]

The Christian missionaries were also responsible for spreading a feeling of distrust and hatred among the rural population.[5] Villagers very much resented missionary interference in their religious life. These missionaries were looked down upon by the people and contact with them was considered a socio-religious offence.

A general belief that British rule would come to an end one hundred years after the battle of Plassey, added fuel to the fire. The planning for an uprising started in the spring of 1857 with the secret distribution of *chapaties* in the villages of Delhi. It is said that the *chapaties* had been distributed in all the villages of Delhi by March 3, 1857.[6]

The Great Uprising

In the uprising of 1857, rural Delhi participated as actively as urban Delhi. All classes of people were involved in this struggle. The villagers helped the revolutionaries in whatever way they could. They welcomed the soldiers of Meerut on their way to Red Fort with sweet juice without any discrimination of caste, creed or religion.[7]

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1. Montgumary R. Martin - *The Indian Empire*, London, 1961 Vol. II, p. 9.
2. *Delhi Residency Records*, Vol. I, 1806-57 Punjab Government Records, p. 129-30.
3. Yadava, K.C., *The Revolt of 1857 in Haryana*, Delhi 1977, p. 23.
4. *The Englishman*, October 5, 1857.
5. *Ibid*, July 11, 1857.
6. W.H. Kerry - *The Muhammadan Rebellion*, Roorkee, 1857, pp. 9-11.
7. Zakka Ullah Dlehlaus - *Tarikh-i-Uraji-Ahadi-Sultanate Englishia*, Delhi 1904.

When the revolt failed and the British recaptured Delhi, the Government took fierce revenge upon the villagers. Many of them known to have helped the revolutionaries were captured and executed by the orders of the Military Commissioner of Delhi. These included Ahmed Khan, Chella Khan Pathan, Issory Chauhan, Faiz Ali, Fayyaz Ali, Karim Bakhsh, Madhosh Khan Pathan, Shaikh Ghohsho, Shaikh Hussain Bakhsh, Sayyad Iradutt Ali, Shaikh Murad Khan, Shaikh Peer Bakhsh, Qadir Bakhsh alias Izzat Ali, Shaikh Badloo, Sheikh Madari, Shaikh Muhammad Bakhsh, Gulab Choudhary, Silka Choudhary and Azmat Ali to name a few.[1]

The villages which actively participated in the uprising were declared *baghis* and widespread massacre was carried out in many of them. It is said that in Dera Fatehpur village, only infants hidden in the laps of their mothers could escape slaughter. Harvest was looted or burnt and cattle confiscated. This was also the year of the famine. The peasants could not pay the revenue but Government insisted on full payment. Many villagers died of hunger.

After the events of 1857 the anti-Government feeling in the villages became marked. It surfaced whenever an opportunity appeared. On April 16, 1886 seven soldiers of 2nd Linclon Regiment, stationed in Red Fort, out on hunting were surrounded by the villagers. An encounter took place in which one villager was killed.[2]

After the failure of the uprising, the Christian missionaries intensified their activities in rural Delhi. The famine of 1857 provided them a good opportunity. About 900 *chamars* (cobblers and dealers in hide) were converted to Christanity in the following decade.[3] In response to this, Arya Samaj started the *Shudhi Andolan* and many people were reconverted to Hinduism.

The birth of the Indian National Congress in 1885 was an important event in the history of the freedom movement of the country. In the beginning it played the role of a mediator between the British Government and the people. But with the dawn of 20th century, the nature and role of the Congress Party started changing. In 1906, the Congress passed four resolutions on self government, *Swadeshi*, boycott and national education in Calcutta, under the presidentship of Dadabhai Naoroji.

The *swadeshi* movement became very popular in rural Delhi Arya Samajists played a leading role in spreading the cult of *swadeshi* in these areas. The villagers of Larsaoli vowed to give up the use of imported sugar and requested the village *banias* to refrain from selling it. In September 1908 when it was found that some *banias* still continued to sell foreign sugar, a panchayat was held and the offender was fined a sum of Rs. 10. The *Panchayat* agreed to give a reward of Rs. 2 to any person who gave

1. These names figure in *Who's Who of Delhi Freedom Fighters* Vol. I.
2. Letter of the Commissioner of Delhi Division to Jt. Secy. of Punjab Government. Letter No. 446, September 19, 1890 *Punjab Record Office*, Patiala. Delhi Division Bundle 1890.
3. Western – *The Early History of the Cambridge Mission to Delhi*, 1950, p. 36.

information against any such offender. The *banias* were warned of expulsion from the village if they defied the wish of village *panchayat*.[1]

Spread of Congress Cult in Rural Delhi

The First World War started in 1914. Delhi made a substantial contribution to the British war effort in men and material. Most of the recruits for the army came from rural areas. But by the year 1918, the Congress influence had reached the rural masses of Delhi. At the Delhi session of the Indian National Congress held in December 1918 and presided over by Pandit Madan Mohan Malaviya, some 800 delegates from rural Delhi participated.[2] In January 1919, Pandit Malaviya pleaded for setting up Congress Committees in every *mohalla* and every village of Delhi so as to propagate the message of nationalism among the masses.[3] This kindled the spirit of the people and prepared them for the impending *satyagraha* movement.

Non-cooperation Movement

The Rowlatt Act generally called the Black Act was passed by the British Government in 1919 to suppress opposition in the country. On 30th March, Delhi observed a *hartal* against this enactment. It had an inspiring effect on rural Delhi as well.

With the arrival of Gandhiji on the national scene, the national movement took a new turn. He greatly influenced the rural population who found in him their true representative. In the Nagpur session of Congress held in December, 1920 the party accepted the programme of recruiting volunteers to which rural Delhi contributed in a big way. This is amply evident from the reports filed in various police stations of Delhi. Village Karala near Nangloi in west Delhi was the centre of these recruitments. One Mohmmad Din, resident of Gujrat (Pakistan) recruited volunteers in the house of Jhandu of Karala. A case was filed and Mohmmad Din was arrested and sentenced to rigorous imprisonment for 18 months.[4] Mohammad Yasin, the secretary of the village Congress Committee also recruited a large number of volunteers in Karala. He also made anti-Government speeches for which he was arrested and sentenced to 18 months rigorous imprisonment in Central Jail, Delhi.[5] Jhandu, who had made his house available for recruitment activities was arrested and charged for sheltering criminals.[6] He was sentenced to 15 months rigorous imprisonment at Delhi Central Jail.[7] While recruitment activities were going on in rural Delhi, Gandhiji withdrew the

1. Weekly report by the Punjab Government on the state of political affairs in Punjab September 7, 1908 *Home Public Proceedings No. 1-8, October, 1908.*
2. Weekly Report - District Criminal Intelligence January 4, 11, 1919. *Home Public Proceedings No. 148-52, April, 1919.* Fortnightly Reports, Delhi 2nd Half of December, 1918.
3. *Home Political Deposit Proceedings No 42, January, 1919*
4. *Nangloi Police Station, FIR No. 15* dated 10.2.1922.
5. *Ibid. FIR No. 20* dated 14.3.1922, also *Who's Who of Delhi Freedom Fighters*, Vol. I, p. 425.
6. *Nangloi Police Station, FIR* No. 19 dated 14.3.1982.
7. *Who's Who*, Vol. 1, p. 190.

non-cooperation movement, on account of violent incident of Chauri-Chaura. This was followed by a period of political inactivity in rural Delhi.

No Tax Campaign

The economic depression of the late twenties added to rural unrest, in Delhi. Prices of agricultural products came down sharply. Wheat prices decreased by 50% and jute prices by 65% but the Government increased the revenue. *Lambardars* demanded revenues in cash instead of kind from tenant farmers which added to their misery.

The Government policy of leasing agricultural land to Britishers on nominal rent also agitated the villagers. On April 1, 1923, 718.33 acres of land near Shahdara was given to a Britisher on lease for 23 years. This piece of land had been denied to a co-operative society earlier.[1] Vidya Rattan, a member of the Delhi Congress Committee, led an agitation and a report was filed against him on this account by the lessee.[2]

No Tax Campaign in Rural Delhi

On July, 24, 1929 the Delhi District Working Committee of the Congress appointed a sub-committee to spread the Congress creed in the villages.[3] The idea was to prepare the peasants of rural Delhi for the impending political struggle.

The Congress adopted a resolution supporting the non-cooperation movement in the Lahore session of December, 1929. As a consequence of this, 'no tax' campaign was intensified in rural Delhi. Fortnightly reports sent by the Chief Commissioner of Delhi to Home Secretary amply prove this. "The Congress Committee has been displaying unusual activity in the rural areas of the province. Their objective is to prepare the villagers for accepting the doctrine of non-cooperation in the form of non-payment of taxes."[4]

In December, 1929 it was decided to enroll 10,000 Congress volunteers from rural Delhi with centres at Shahdara, Najafgarh, Mehrauli and Alipur.[5] In fact in the beginning of 1930, Congress activity in Delhi was largely concentrated in rural areas. The *Naujawan Bharat Sabha* held a conference with peasants of the surrounding villages at Shahdara on February ., 1930. *The Hindustani Seva Dal* also started publicity work in the villages under the directions of the *Nauja wan Bharat Sabha*. Meetings were held at Tughlaqabad and Sonepat on 9 and 13 February, 1930 and a resolution was passed asking the local Government for exemption from the payment of land revenue owing to the failure of crops.[6] One such meeting was held on February 24, 1930.

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1. *Proceedings of Legislative Assembly*, September 1935. 853-54.
2. *Shahdara Police Station, FIR No. 22* dated 11 4 1930.
3. *Fortnightly Report, Home Confidential 1929*, 6th August, 1929, page 15, Delhi Archives, Delhi.
4. *Ibid*, 21 November, 1929 p. 22.
5. *Ibid*, 19th December, 1929 p. 24.
6. *Ibid*, 18th February, 1930, p. 4.

Another successful conference of the peasants of Najafgarh area was held on Sunday afternoon at Najafgarh on the same date. In spite *Zaildar's* (headman of about 25 villages) proclamation that people attending the meeting would be arrested, peasants came in large numbers from far off villages on foot, in carts and on camel back and squatted under the burning sun to state their grievances.

A party of about a dozen workers of the *Naujawan Bharat Sabha* led by Pandit Indira, reached Najafgarh at 1 p.m. The *tehsildar* and a CID Inspector from Delhi had reached the place earlier. Prof. Mukhram presided over this meeting. Pandit Indira moved a resolution demanding that the local Government should remit land revenue in view of the drought, locusts and lack of irrigation facilities. He asked the peasants to present a united front and assured them that once they united, victory would be theirs.[1]

The Salt Satyagraha

While 'no tax' campaign was catching up in rural Delhi, Gandhiji started the *Salt Satyagraha* after the famous Dandi March. In response to this Congress volunteers planned to make salt near Yamuna at Shahdara. According to an eye witness account, "On 8th April 10-11 Congress volunteers came towards Seelampur from Shahdara at about 11a.m. They started making salt and continued to make for two hours. When police reached, salt had alsmost been prepared. Local public had surrounded volunteers, so that after great difficulty only police could reach up to them. Police had orders to use minimum force and confiscate the salt. Volunteers said they would not part away with salt, whatever may happen to them. In the struggle that followed, the salt had scattered on the ground. Volunteers again collected the salt. This struggle continued for about one and half hour. Stones were thrown towards police from the crowd Both the policemen and the volunteers got hurt. About 4 p.m. public departed carrying salt and shouting "*Vande Mataram*". Wounded volunteers were carried on cots in a procession.[2]

This incident was widely covered by the Delhi dailies. *The Hindustan Times* wrote :

"The site of making salt is on the roadside from where lorries, coming from Meerut and Bulandshahar pass. The *satyagrahies* are carrying a *variable* propaganda for the boycott of foreign cloth and for manufacturing salt. They stop the passing buses, entreat people to give away some of the foreign clothes in their possession and give them the contraband salt to taste. They also made bonfire of foreign cloths, thus collected.[3]

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1. *The Hindustan Times*, Febraury 26, 1930.
2. *Home Political, File No. 256/1, 1930*, National archives, Delhi.
3. *The Hindustan Times* April 9, 1930.

The Congress workers also organised publicity tours through the villages. A group of 20 volunteers visited 24 villages between 8 and 10 April for this purpose. The group started from Mehrauli and within 12 hours covered the villages of Sultanpur, Chhattarpur, Naidu, Garhi, Deoli, Khanpur, Madangir and Saidul Ajaib. In all, eight well attended meetings were held. Men, women and children ran to see and listen to the volunteers, affectionately called, Gandhiji's army. Hindus and Muslims, rich and poor, all flocked to hear the message of freedom. The Congress flag was a big attraction to all. At Chhattarpur, the Muslims attended the meeting in large numbers. Women also attended such meetings.

The party reached Saidul Ajaib at 5 p.m. The village boys marched in procession shouting revolutionary slogans to greet the party. Subsequently men, women and children collected at the *chaupal* where a meeting was held for over two hours. It is interesting that a *zaildar* who initially opposed the volunteers was so much impressed by them that he not only regretted his misdeed but also served the party with *lassi* and shouted "*Mahatma Gandhi Ki Jai.*"

On Tuesday after prayers and flag salutaion at 7 a.m. the party left for village Lado Sarai. Here the village headmen opposed the entry of the volunteers and reported the matter to Mehrauli Police Station. However, a very successful meeting was held here. Similar meetings were held at Hauz Rani, Adh Chini and Begumpur villages. Everywhere the people responded admirably. Nanak Chand, a member of this party, was arrested in Jangpura village.[1] Another member, Baij Nath, was also arrested and sentenced to six months rigorous imprisonment. He was charged for inciting the residents of Shahdara to refuse payment of tax and for supporting the peasants and zamindars of Narela, who had preferred jail.[2] This 'no tax' campaign was very much welcomed by the oppressed peasants of Delhi.

Krishna Nair was the moving figure behind the civil disobedience movement in rural Delhi. He successfully organised 'no tax' compaign in Narela and the surrounding villages. Reports of his activities received wide publicity in the national newspapers:

"Delhi. June 11. The war council of the Delhi District Congress Committee has deputed Mr. C. Krishna Nair, who had been sent to Delhi by Mahatma Gandhi, to help the Congress work and to organise Narela and the surrounding villages for mass civil disobedience. He reached Narela on the evening of 7th instant with a batch of volunteers. After conferring with Pandit Umrao Singh, the local Congress President, a few *lambardars* and representatives of farmers, it has been decided to open

1. *The Hindustan Times*, April 11, 1930.
2. *Shahdara Police Station F.I.R.' No. 35* dated 9.7.30.

a *satyagraha* Camp in Narela and enlist volunteers for organising 'No Tax Campaign' in Narela and the surrounding villages, numbering about seventy. Nine of these villages have yet not paid their dues to the Government though it is the custom to clear the dues before the 15th June."[1]

The reporting of Narela Camp, published in the *Tribune*, Lahore, was a matter of serious concern to the British Government is clear from a letter addressed by D.J. Boyd, the Chief Secretary to J.N.G. Johnson, the Chief Commissioner of Delhi. He wrote "Narela is only one mile from Punjab border and operations at Narela may have a serious effect upon the Punjab."[2]

Nair was arrested with six other workers on June 15 and sentenced to eleven months imprisonment on July 16, 1930.[3] He was subsequently transferred to Gujarat jail on August 7, 1930. Two *lambardars* were also arrested.[4] But these repressive measures could neither dampen the spirit of the people nor calm the political fervour in the villages. According to a secret report, some volunteers carrying Congress flags came to Karala village from Bawana village on the evening of August 23, 1930. The same evening a meeting was held at the *chaupal* of the village at 8 p.m. In this meeting Congress volunteer, Mussadi Lal, Chandu Lal and Devi Dutt of Karala delivered anti-Government speeches. Devi Dutt distributed some pamphlets, written in Urdu meaning "payment of taxes to Government is a crime."[5] Subsequently those who delivered speeches in this meeting were arrested and sentenced to various terms of rigorous imprisonment. They were kept in the Central Jail, Delhi but subsequently Devi Dutt and Chandra Bhan were transferred to Lahore Jail.[6]

This 'No Tax Campaign' had many faces. Sometimes meetings were held, sometimes people took out processions. Shri Ram Swaroop of Nangloi refused to pay tax. But it was feared that the whole village might suffer on account of his action and therefore, *lambardar* of the village paid the tax on his behalf.[7]

In order to discourage 'no tax' compaign in rural Delhi the government passed a special ordinance. But in spite of this, meetings continued. Police not only arrested those who participated in these meetings, but also those who were found standing any where near such meetings.

Karala village in west Delhi was the centre of Congress activities since 1920. On October 12, 1930 a meeting was held in this village which was attended by about

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1. *Home Confidential*, 1930 pt. C. F. No. 48. p. 1 (a) Delhi Archives.
2. *Ibid*
3. *Who's Who, op cit* Vol. I p. 227.
4. Fortnightly Repots, *Home Confidential 1930 P1/B/1* 20th June, 1930 p. 16.
5. *Nangloi Police Station* FIR No. 22 dated 27.8 1930.
6. *Who's Who, op cit* Vol I, p. 86 and 110.
7. From the written statement of Shri V.C. Parashar, Ex. M.P.

100 men, women and children. On October 14, 1930, a branch of the Delhi Pradesh Congress Committee was opened in Karala village in the house of Shish Ram. Kure, a respected resident of the village was made the head of this branch.[1]

Shri Gandhi Seva Ashram Narela

Congress volunteers had been active in rural Delhi since the beginning of the century. In 1930 some workers of Delhi villages requested Gandhiji to establish a permanent *ashram* at Narela. Gandhiji consented and thus in 1930 Shri *Gandhi Seva Ashram* came into being there. The villagers of Narela donated 17 *bighas* of land for this purpose Krishna Nair was made in-charge of this camp. Brij Krishan Chandiwala also helped in establishing this *ashram*.[2] Many Congress workers, who had been staying at the Daryaganj *ashram* of Delhi, which was now closed, also shifted to Narela. Vedhi Charan Parashar, who had come to work in Delhi from Shivpuri, (M.P.) was also one of them. Local villagers generally helped the Congress workers.[3] About 8 to 10 persons stayed at this *ashram* on a permanent basis. They helped to educate local people and worked for keeping the village clean. Like Narela an *ashram* was also established at Ramtal, Mehrauli in August 1931.

In 1931 rural Delhi witnessed increased political activity. The Chief Secretary, Punjab Government expressed great concern to the Chief Comimissioner of Delhi in this matter.[4] Kishan Lal Azad of Kailana village in Rohtak district was said to be the brain behind this agitation.[5]

When Government could not suppress the national movement by force, it tried to disrupt political meetings with the help of police and local *zaildars* and *lambardars*. On December 4, 1931, a meeting was held near Nangloi, where some 300 people gathered from nearby villages of Kanjhawala, Ladpur, Jonti, Madanpur, Rani Khera, Rasulpur and Nizampur. Bihari of Ladpur village presided over the meeting. When Dr. Sukhdev, who had been invited from Delhi started his speech, some *lambardars* interrupted the meeting. A police Inspector who was present there dispersed the crowd and arrested Bihari and Govardhan. Bihari a veteran freedom fighter, was sentenced to three months rigorous imprisonment.

Individual Satyagraha

After the failure of Second Round Table Conference in 1931, the British adopted a policy of repression in India. Gandhiji unsuccessfully implored the Viceroy to put a stop to this repression and finally announced a non co-operation movement in January, 1932 in the form of *satyagraha* on individual basis. The Government acted swiftly and all delegates to the Congress session in Delhi, including Gandhiji were arrested.

1 *Nangloi Police Station, FIR* No. 54 dated 14.10.1930.
2. *Who's Who, opcit*, Vol. I, p. 85.
3. From the written statement of Shri V.C. Parashar, Ex-M.P.
4. *Home Confidential. 1931, pt. C. Misc F. 1 (26)/31* p.I, Delhi Archives,
5. *Ibid.* p. 4

This policy of repression was greatly resented in urban as well as rural Delhi. People expressed their anger in various meetings held in villages. One such meeting was held at Narela on January 8, 1932. It was addressed by Sri Chand, Bupan and Inder Singh. The speakers were arrested and sentenced to three months rigorous imprisonment and a fine of Rs. 20 each. On refusal to pay fine, their sentence was enhanced by 45 to 60 days.[1] On January 12, 1932 another meeting was held at Narela. Jai Lal and Harnandan Singh were arrested for participting in this meeting.[2] Another important meeting was held on January 14, 1932 at Narela in which people from distant villages also participated. Girwar of village Attari, Ballabhgarh, Jug Lal of village Karari, Sonepat and Bhawan of village Bankner, near Narela were important participants in this meeting.[3] On January 22, 1932 one such meeting was held at village Bawana and it ended with many arrests.[4]

Alongwith the meetings, the enrolment of volunteers for Individual *satyagraha* also increased in the villages. A complaint was filed at Narela Police Station, against Jai Singh of village Silahpur for recruiting volunteers in Akbarpur and Bakhtawarpur villages, on behalf of Narela District Congress Committee. Jai Singh was arrested and sentenced to 4 months rigorous imprisonment and a fine of Rs. 50. His cow was auctioned to realise this fine.[5]

Constructive Activities of the Congress in Rural Delhi

After 1932, Congress shelved its Civil Disobedience Movement. In its place Gandhiji launched a constructive programme which included removal of untouchability, rural uplift and encouragement of small scale industries. Gandhiji organised a nation wide campaign against untouchability. The congress volunteers made a success of it in Delhi villages. Many inter-caste dinners were organised in the villages. Congress leaders persuaded villagers in Mehrauli area to allow untouchables to draw water from the wells so far reserved for upper caste Hindus Upper caste Hindu volunteers willingly worked among the untouchables and shared *hukka* with them.

On January 2, 1935 Gandhiji inaugurated a Harijan Conference at Narela. As per the report of *Hindustan Times*:

"The conference was attended by more than 600 sturdy peasants and untouchables and about one hundred women. Addressing the congregation, Gandhiji asked the Harijans to raise their hands, in order to enable him to see as to how many of the population of the thousand Harijans at Narela had attended. Since the over-

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1. *Nangloi Police Station, FIR* No, 4 dt. 8.1.1932.
2. *Ibid. FIR* No. 5 dt. 12.1.1932.
3. *Ibid. FIR* No. 7 dt. 14.1.1932
4. *Ibid., FIR* No. 8 dt 22.1.1932.
5. *Narela Police Station* FIR No. dt. 6.2.1932.

whelming majority of those who showed hands were non-*harijan*, he addressed them advising that they should agree to the Harijans social equality and encouragement and facilities for making leather goods, so that all raw-hides and skins, which India now exported, could be consumed at home much more profitably.

After Gandhiji had left for Delhi, the conference under the chairmanship of Babu Satish Chandra Das Gupta passed a number of resolutions. The resolutions thanked Gandhiji for what he had done to improve the lot of the Harijans and appealed to Hindus and the Government to remove all social, religious and legal disabilities against Harijans and to give special financial and other facilities to Harijan children in schools.[1]

Many schemes were started in rural Delhi under this programme. In 1934 the Ramtala *ashram* was established by Bihari Lal in Katwaria Sarai, near Mehrauli for educating rural people. Dr. Sukhdev started the Gandhi Charitable Rural Hospital in Lal Kuan outside Badarpur to serve the villagers. Dr. Yadhvir Singh established a charitable homeopathic dispensary near Nangloi with the same intent. Prabhu Dayal started a school in Bankner village near Narela.

With a view to spread political awakening in rural Delhi, some staunch Congressmen viz. Jugal Kishore Khanna, Phool Chand Jain and Dr Yadhvir Singh extensively toured the villages. They highlighted the problems of the rural poor and as a result of this, some dispensaries were opened in the villages. Congress volunteers also popularised *charkha* in rural Delhi.

On January 9, 1935 a deputation of the Delhi District Congress Committee met Gandhiji to seek his advice on the village uplift programme in the Delhi Province. The difficulties of those engaged in the *gur* and rice industries, which were faced with severe competition were brought to his notice. Gandhiji advised them to gather necessary data on village industries before starting any programme. He, however, told them that the task of encouraging village industries should primarily be entrusted to the Village Industries Association and the Congress should not interfere in their programme.[2]

Gandhiji toured some villages of Delhi from 23 to 25 January, 1935. These included Narela, Bankner, Bawana, Hauzkhas, Humayunpur, Munirka and Katwaria Sarai. He spent about half an hour in each village. He walked through the market and lanes of Narela village bare foot and advised people to use *khadi*, *gur* and hand ground flour. At Narela *ashram*, he was presented a purse of Rs. 101. Gandhiji also visited some Harijan houses.

1. *The Hindustan Times*, January 3, 1935.
2. *The Hindustan Times*, January, 10, 24, & 25 1935.

On April, 26, 1936 the Delhi Pradesh Congress Committee held a meeting in Meerut. There it was decided that political activities should be concentrated in the villages of Delhi. Consequently, training camps were opened at Najafgarh, Narela and Shahdara to train volunteers to work in the villages. This gave a fill up to the national movement in rural Delhi. The Congress volunteers toured many villages and addressed the villagers. By now rural Delhi had come to occupy an important place in the freedom struggle of the country. Jawahar Lal Nehru, when he came to Delhi in October 1937, addressed a large meeting at Nangaldevat village in the Mehrauli area.

In November some prominent Congress workers viz. Krishna Nair, Satyawati, Swami Swaroopanand and Krishan Chand toured rural Delhi to study the problems of the people. The Chief Commissioner of Delhi, however, did not approveof this and banned their participation in any kind of political activity for four months. The people of rural Delhi met in Gandhi-maidan on 24 November, to protest against this order.

Many villages celebrated 'Independence Day' on 26 January, 1938 and as many as seven flag salutation ceremonies were organised.[1] This renewed political activity attracted the attention of Chief Commissioner of Delhi who made a note of it in his fortnightly report.[2] In October 1938 Subhash Chandra Bose also addressed meetings in two villages. In November 1938 Sarojini Naidu presided over a large meeting in Badarpur.[3]

Anti-War Feeling

The Second World War started in September 1939. The Congress workers pleaded with the people not to help the Government with men or money. Meetings were held in many villages and posters distributed against participation in war. As the war progressed Congress intensified its anti-war propaganda. At a meeting held at Basai Darapur village on August 28, 1940 Krishna Nair of Narela Gandhi *Ashram* addressed the people. He said that if Indians could manage affairs of their homes, they could manage the affairs of their country too. He was arrested and sentenced to one year's rigorous imprisonment.[4] In another meeting held on December 28, 1940 at Mahipalpur, Brij Krishan Chandiwala and Dr. Yadhvir Singh asked people not to join the army.[5]

Individual Satyagraha

A camp was opened at Narela in preparation of Individual *satyagraha*. Gradually the campaign caught up and camps were opened in other villages also.

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1. *Fortnightly Report: Home Confidential.* 7 February, 1938, p. 9, Delhi Archives.
2. *Ibid.*, 21st March, 1938, p. 16.
3. *Ibid.*, 2nd November, 1938, p. 16.
4. *Nangloi Police Station, FIR No. 93* dt. 28.8.1940
5. *Mehrauli Police Station, FIR No. 9* dt. 30.12.1940.

One such camp was opened in Kutubgarh village on July 18, 1940. Spinning was an essential programme of these camps. People were also educated in the principles of Individual *Satyagraha*. On 25 September a similar camp was opened at Badarpur and on 10 October at Bijwasan.

In October, 1940 Gandhiji gave a call for *satyagraha*. The Satyagrahis from rural Delhi came to enroll themselves in these camps. Their forms were sent to Gandhiji for his approval. In this connection Asaf Ali and Brij Krishan Chandiwala toured many villages of Delhi from November 23 to 26, 1940. The intention was to include at least one *satyagrahi* from each village of Delhi. The *satyagrahis* were instructed to inform authorities about the place and time of their *satyagraha* beforehand.

As a result of prior information the police generally arrested *satyagrahis* before the date of their actual *satyagraha*. Chaudhary Bihari of Ladpur village who was to begin *satyagraha* on January 7, 1941 was arrested on January 5 itself. On 7 January, Swami Swaroopanand and Chaudhary Hari Ram were arrested. Chaudhari Navi Sinha of Bawana was arrested on 8 January. On 17 January Jyoti Prakash and Mathura Prasad were arrested from Mehrauli and Narela respectively.

The following persons were imprisoned from rural Delhi during the course of Individual *Satyagraha*.[1]

Name of the Jail	Name and Village	Punishment	Fine	Date of release
1	2	3	4	5
Shahpur Jail	Shashi Ram Karala	1 year	-	7.12.41
	Chandgi Ram Barwala	1 year	50/-	7.12.41
	Jug Lal Mungespur	9 months	25/-	7.12.41
	Gyani Ram Pooth Khurd	1 year		7.12.41
	Man Singh Bakhtawarpur	1 year		7.12.41
	Ram Saher Pooth Khurd	Rs. 50/- fine or 3 months more of imprisonment		7.12.41
	Lal Singh Bankner	1 year		7.12.41

1. Chandiwala, Brij Krishan, *Gandhi Ji Ki Dilli Diary*, vol. II, pp. 118-120.

1	2	3	4	5
	Suraj Mal, Ramtal Mehrauli	1 year		7.12.41
	Tek Chand, Narela	1 year		7.12.41
	Niyadar Singh, Madipur	1 year or 3 months more imprisonment	75/-	7.12.41
	Sher Singh, Kair	1 year		7.12.41
Borstal Jail	Hari Ram, Chhawlla	1 year		6.12.41
	Surat Singh, Chhawlla	1 year		6.12.41
	Vedpal, Mundka	1 year		6.12.41
	Hoshiar Singh, Narela	1 year		6.12.41
Layalpur Jail	Ram Singh, Nangloi	1 year		6.12.41
	Nanhe Singh, Khera Khurd	1 year		6.12.41
Sialkot Jail	Prabhu Dayal, Bankner	1 year		6.12.41
	Sukh Lal, Shahpur Narela	1½ years		6.12.41
	Sukhdev, Nangloi	1 year		6.12.41
	Amut Lal, Ghitorni	1 year		9.12.41
Jullundur Jail	Rati Ram, Sidhola	1½ year		9.12.41
	Chatur Singh, Basai Darapur	1 year		9.12.41
	Ram Sarup, Prahladpur	1 year		9.12.14
	Swami Swaroopa-Nand, Narela	1½ years		Released according to ruling

1	2	3	4	5
	Dharamvir, Narela	1½ years		9.12.41
	Ram Singh, Jharoda	1 year		9.12.41
Ferozepur Jail	Ramji Lal Bandhu, Ujwa	1 year		9.12.41
	Bihari Singh, Ladpur	9 months		9.12.41
	Ram Swarup, Nangloi	1 year	100/-	6.12.41
	Mathura Prasad, Majra	1½ years		6.12.41
	Shiv Nath, Basai	1 year		6.12.41
	Sri Gopal, Narela	2 year	100/-	6.12.41
	Swami Basant Nath, Narela	3 year		6.12.41
	Molad Singh, Bijwasan	1 year		6.12.41
	Jug Lal, Mangholpur	1 year	50/-	6.12.41
	Vidya Ratan, Shahdara	1½ years		6.12.41
	Chhajju Ram, Mungespur			
	Budh Ram, Sameypur	9 months		25.9.41
	Ram Lal, Ghitorni	1 year		6.12.41
	Ganpat Vaidya, Madipur	1 year		6.12.41
	Date Ram, Katawaria	1 year		6.12.41
	Hoshiar Singh, Karari	6 months	100/-	6.12.41
	Tekan Ram, Majra	8 months		6.12.41

1	2	3	4	5
	Khazan Singh, Mangolpur	9 months	100/-	6.12.41
	Brahma Prakash, Shakurpur	1½ years	50/-	6.12.41
	Vidya Krishan Lal, Najafgarh	1½ years		
Multan Jail	Harish Chandra, Nangloi			
	Ram Singh, Nangloi			

In a meeting held at Nangloi in January, 1941, with Ram Swaroop in the Chair, a resolution expressing complete confidence in the leadership of Mahatma Gandhi was passed.[1] On 12 February, 1941 a meeting was held at village Chilla near Shahdara with Ram Chandra alias Ram Babu in the Chair. Harbans Lamberdar and Pandit Jugal Kishore of village Patparganj also attended this meeting.[2] On 9 March another meeting was held at Ganga Toli, Narela with Ram Pahar in the Chair. Mir Mushtaq Ahmad, Jugal Kishore Khanna, Brahma Prakash and Dr. Shankar also spoke on this occasion. In another meeting held at Nangloi on 27 July, 1941 Harish Chandra, resident of Jawala Heri Village impressed upon the people that India could not prosper till it remained under foreign rule.[3]

Anti-Government and anti-War slogans were raised in all three meetings. Sometimes, slogans were written on the walls also. Those involved in these activities were often arrested. Sukhlal of village Shahpur Garhi near Narela, was arrested while writing slogans on walls in Mehrauli.[4] Ram Singh of Nangloi was also arrested for such activities in Najafgarh town.[5]

Quit India Movement

The national movement took a new turn in 1941. The World War had begun and the threat of Japanese invasion on the eastern border of India had become very serious The British government was keen to secure Indian cooperation in this grave crisis. The Indians on the other hand demanded a definite assurance of independence in return after the War. The British Government sent Sir Stafford Cripps to find a way out of the situation but he utterly failed This created wide frustration in India.

1. *The Hindustan Times*, 6 January, 1941
2. *Shahdara Police Station, FIR No. 10*, dt. 22.2.1941
3. *Nangloi Police Station, FIR No. 62*, dt. 27.7.1941
4. *Mehrauli Police Station, FIR No. 30*, dt. 21.4.1941
5. *Najafgarh Police Station, FIR No. 17*, dt. 16.5.1941

Finally on August 8, 1942, All India Congress Committee passed the Quit India Resolution. The governmet responded with large scale arrests. Gandhiji and the members of the Congress Working Committee were arrested in a pre-dawn swoop on 9 August.

Important leaders of Delhi were also arrested. Some of them however, managed to go underground. The Delhi Congress Committee was declared an unlawful body on August 9 and Gandhi *Ashrams* at Narela and Mehrauli and Gandhi Khairati Hospital at Badarpur were seized by the Government. In Delhi people's anger knew no bounds and much destruction was caused to government property.

The villagers of Delhi actively participated in Quit India Movement. Reports filed in various police stations of Delhi amply prove this. On August 11, 1942 a big demonstration took place in Shahdara. The mob broke into the central room of Shahdara railway station and damaged wirings. The records were set ablaze and cash looted. Nine persons were sentenced to rigorous punishment for participation in these demonstrations.[1] On the same day, Kishan Ganj and Subzi Mandi Railway Stations were also set on fire.[2] Some other railway station in rural Delhi were also damaged. People expressed their resentment mostly by damaging railway lines and telegraph wires.

School students in villages also participated in these activities. On August 13, students of the Jat High School, Kheragarhi damaged telegraph wires. Telegraph lines connecting Daryapur, Johola and Chhota Thana villages were also destroyed.[3]

As a mark of protest, meetings were held in many villages on August 19. Prabhu Dayal of Bankner village advised farmers not to obey *tehsildars, thanedars, patwaris* and *lambardars* and refuse to pay revenue.[4] On August 20 there was complete *hartal* in *Narela*. On August 23 police and army encircled these two places, made a thorough search of the houses and arrested many people. In Wazirpur village, Sibba Chand was arrested for similar activities.[5] Ram Mehar, resident of village Pooth Khurd, told the people of Barnala that the Congress had desired all schools to be closed.[6]

As stated earlier the British Government had arrested almost all the important leaders of Delhi by early August. Some of them, however, went underground and directed the movement from their secret hideouts. Krishna Nair, who managed the Narela *Ashram*, could not be arrested for some months. Pandit Ganpat Vaidya, a resident of Madipur village and a well known activist also could not be arrested. Many workers were interned within the boundaries of their villages. They had to

1. *Railway Police Station, Delhi FIR No. 129* dtd. 12.8.42
2. *Ibid.* FIR No. 128 dtd. 12.8.42
3. *Narela Police Station FIR No. 46* dtd 26.8.1942.
4. *Ibid, FIR No. 43* dtd. 12.8.1942
5. *Ibid, FIR No. 47* dtd 27.8.1942
6. *Ibid, FIR No. 48* dtd. 5.9.1942

report twice a day to *lambardar.* If the police found them missing, their property was confiscated.[1] One Amilal, resident of Chirag Delhi was arrested and sentenced to one year's rigorous imprisonment for failing to report to authorities.[2] Police occasionally raided the houses of suspected people.[3]

Anti-government activities continued in the Delhi villages even when the heat generated by 'Quit India' Movement had cooled down. On August 27, 1943 some persons were recruited from village Bhakhtawarpur to serve in the Indian army. Balwant Singh, a resident of the village however persuaded the recruits to drop out. The village *lambardar* complained against him and he was arrested.[4] On August 7, 1943, the police raided the house of Sukh Lal of Shahpur Garhi village. Some anti-Government posters, written in Hindi, were found in his house and he was sentenced to six month's imprisonment.[5]

By 1943 many freedom fighters had been released from jails after completing their term. They were, however, required to report their presence at the police stations. Many people ignored this requirement and were sent to jail again. The *Hindustan Times* report published on September 26, 1943 attests to this.[6]

"Mr. Vidya Ratan a village worker, who had recently been released from detention under rule 26 was rearrested for alleged non-compliance with the District Magistrate's order, requiring him to report himself to the police twice a week.This is the second prosecution for defiance of the District Magistrate's order, the first case, being of Ram Saran Chauhani, who had been arrested and remanded to judicial custody."

By the year 1944 the changed political climate of the country emboldened the freedom fighters in rural Delhi. They openly defied the authority and criticised the Government. On January 7, 1944 one Chandra Bhan of Bawana village who was found instigating people against Government was let off without any action.[7] Mehar Singh of Bijwasan village who defied the internment order of Deputy Commissioner was however, sentenced to one year's rigorous imprisonment.[8]

It may be stated here that the freedom struggle in rural Delhi solely depended on peasants, who generally came from the middle class Jat families. The Brahmins also supported the struggle but their number was not very large. The weaker sections of the society played a negligible role in the struggle, probably because of economic compulsions. It is, however, beyond doubt that the freedom fighters, no matter from

1. *Narela Police Station, FIR No. 67* dtd. 15.12.1942
2. *Mehrauli Police Station, FIR No. 2* dtd. 3.1.1942
3. *Narela Police Station, FIR No. 68* dtd 16.12.1942
4. *Narela Police Station, FIR No. 43* dtd. 3.8 43
5. *Ibid, FIR No. 44* dtd 7 8 1943
6. *The Hindustan Times*, dtd. 26.9.1943
7. *Narela Police Station, FIR No. 5* dtd. 7.1 1944
8. *Najafgarh Police Station FIR No. 65* dtd. 12.12.1944

which caste or class of society they came, were a highly motivated lot prepared to make any sacrifice in the cause of national freedom.

Metropolitan Delhi generally influenced the political developments in rural areas. It provided leadership to villagers. This does not, however, mean that rural Delhi was lacking in effective leadership. Swami Swaroopanand, Choudhary Bihari and Krishna Nair were the front ranking leaders who led the freedom struggle in rural Delhi. Brij Krishan Chandiwala, Smt. Satyawati, Vaidya Krishna Lal, Jyoti Prakash and Dr. Sukhdev were also important leaders who gave effective leadership to the movement. Some of these leaders like Krishna Nair came from distant lands to lead the struggle in rural Delhi. The second line of leadership in rural Delhi comprised Smt. Arti Devi and her husband Balak Ram and Amrit Lal of Mehrauli, Choudhary Sri Gopal, Udmi Ram, Umrao Singh Sharma and Tek Chand of Narela, Mathura Parshad, Kanhayya and Teka of Bawana, Choudhary Brahm Prakash and Swami Chhotu Ram of Qutabgarh, Urmi Lal of Chirag Delhi and Sukhdev and Umrao Singh of Nangloi. The list by no means exhaustive, however, attests to the fact that rural Delhi did not suffer on account of leadership.

Some of these leaders staked their family and fortune in the cause of the nation. In this connection, the name of Dheeraj Singh of Mahipalpur village deserves special mention. His family suffered greatly at the hands of the police for its patriotic fervour. Another family was that of Parmeshwar Dutt of Shahdara. This man refused to bow before the Government in spite of heavy repression perpetrated on his family. Consequently his father and brothers also suffered immensely. The Government sealed their house and confiscated their property to penalise them.

In 1946, the hope of India's freedom was brightening. But the tension between Hindus and Muslims, the two major communities of the country was also increasing. It ultimately ended in the partition of the country on August 15, 1947.

Geographically being close to the seat of power and the metropolis, rural Delhi was subject to the political influences to a much greater degree than other rural areas of the country. On many occasions when the freedom struggle witnessed a let up in urban Delhi, rural Delhi carried forward the struggle valiantly and successfully.

CHAPTER XIII

EDUCATION

Historical Background

In ancient times when Delhi under the Pandavas, was known as Indraprastha, a number of *Rishikuls*, *Gurukuls* and *Pathshalas* flourished in and around it to serve the educational needs of ruling classes. These institutions were indeed set up in a rural background away from the city. The educational foundation of *acharya* Dronacharya was actually known as *Gurugrama*. *Pathshalas* were run by the *pandits* and state gave them adequate grants for maintenance.

Muslim Rulers of India also patronised learning. Iltutmish established one *madarsa* in Delhi named as *Muizzi*. *Madarsas* were mostly attached to mosques. A centre of higher learning at Hauz Khas attracted scholars from far and wide. Humayun built another centre of education in Delhi where special provision was made for the teaching of mathematics, astronomy and geography. *Maktabs* which were attached to mosques, taught *Quran*.

In the beginning, as traders, the Britishers did not take much interest in the education of people. But growing political gains and territorial expansion brought home the need to educate Indians. Warren Hastings had set up a *madarsa* at Calcutta as early as 1781. A Sanskrit college was also opened there in 1791 by Jonathan Duncon. These efforts also led to the awareness of English language among Indians. However, most of these educational institutions were run by missionaries or philanthropists.

Primary Education

In the beginning of the 20th century, Delhi was only a provincial town. The education of children did not receive adequate attention as local bodies entrusted with the responsibility lacked the required experience. The District Boards in rural areas were also handicapped by financial constraints. It was during Lord Curzon's rule that education received adequate attention. A great deal of public interest was aroused by the Primary Education Bill of 1911. The Government now made more funds available for the expansion of primary education. This led to the opening of some primary schools in rural areas of Delhi.

Till 1912, education in Delhi was under the jurisdiction of the Inspector of Schools of Ambala Division of Punjab. With the transfer of Capital from Calcutta to Delhi in 1912, it was realised that this system could not adequately serve the cause of education in Delhi A Special Officer was, therefore, appointed to look after the educational needs of the capital. To encourage the much neglected female education. a Lady

Officer was also appointed. During this period the administrative control of primary education continued to be with local bodies.

The expansion of primary education was comparatively slow in rural areas. Out of the 240 primary schools which existed on the eve of Independence, only one third were located in rural areas. The District Board directly administered all the primary schools except seven which were privately run but aided by it. The total number of children in all the primary schools in Delhi was 21,735 boys and 10,611 girls. There are no separate figures to show the enrolment in rural schools. The Government realising the inefficient running of the schools under the District Boards decided to provincialise all schools at the time of Independence. This decision was to be of far-reaching importance for the growth and development of education in rural areas.

Secondary Education

The British Government in India followed the policy of aiding secondary schools opened by religious and philanthrophic organisations. It opened one government school to serve as a model in each district. A model school in Delhi was opened in 1905. But the growth of secondary education remained slow owing to Government indifference and in the course of two decades only 12 boys and 2 girls high schools and 25 boys and 8 girls middle schools were established.

In early years of the growth of secondary education, there were two types of middle schools.

1. Vernacular schools and
2. Anglo-vernacular schools

The former treated English as an optional language, whereas the latter as a compulsory language. Anglo-vernacular schools were integrated with high schools and were popular with parents who were interested in providing higher education to their children In course of time the vernacular schools became unpopular.

The Government set up a Board of Secondary Education in 1926 to improve the quality of education. A Text-Book Committee was also set up to improve the quality of text-books from first to eighth standard.

Following the recommendations of Post-War Educational Development Committee, popularly known as Sargeant Committee, the Delhi Administration decided to set up higher secondary schools to provide eleven years of school education (5 years primary +6 years secondary) in place of high schools which provided only 5 years of secondary education.

After Independence, the demand for secondary education grew at a very fast pace. This demand could not be met by sporadic efforts of private management. The

Government was, therefore, forced to open new schools to cope up with the demands of urban and rural areas. This was the time when displaced persons from Pakistan had settled in Delhi in large numbers. They were desirous of continuing with the same pattern of secondary education which they had in their home towns of pre-partition days. The Delhi Administration was, therefore, compelled to open more high schools for displaced students. This decision led to the postponement of the earlier decision to have only higher secondary schools in Delhi. Thus the high schools which existed both in rural and urban areas continued to function.

Growth of Primary Education After Independence

The Independence of the country was accompanied by a new awakening which gave rise to new hopes and aspirations. People became very conscious about the education of their children. This new wave swept over the rural areas also. The Government opened many basic schools in rural areas and took direct responsibility of running them. This was in keeping with the policy of the Government to realise the dream of Gandhiji.

The First Plan laid great emphasis on primary education and this led to unprecedented expansion of education in rural areas. This emphasis continued in subsequent plans also. The following table reflects the expansion of primary education both in rural and urban areas during the last thirty years.

Table-1

Year	Urban		Rural	
	No. of Schools	Enrolment	No. of Schools	Enrolment
1950–51	533	1,23,650	230	23,204
1955–56	588	2,04,053	248	32,019
1960–61	744	3,12,323	252	39,654
1965–66	891	3,95,336	264	43,562
1970–71	988	4,45,994	238	57,860
1975–76	1,573	5,71,615	286	79,669
1980–81	1,620	6,68,775	342	90,424

The responsibility of primary education was shared by the Government, Delhi Municipal Committee, N.D.M.C., Notified Area Committees and the Cantonment Board With the setting up of Delhi Municipal Corporation in 1958, a unified control of primary education was established in Delhi, excluding New Delhi and Cantonment area. Consequently, the Delhi Administration handed over all primary schools under its control to Delhi Municipal Corporation.

Compulsory Primary Education

In view of the Directive Principles of State Policy on education, the Government passed a legislation on primary education in 1960 for making it free and compulsory

for all children. This necessitated great expansion of education facilities in both urban and rural areas. But the construction of school buildings could not keep pace with the expansion facilities. A decision was therefore, taken to run the schools in shifts in both urban and rural areas. Tents were also used for providing additional accommodation in existing school buildings and for opening new schools in new colonies and villages. Tents were gradually replaced by temporary sheds or permanent buildings. The nature of facilities provided for running primary schools in rural areas can be seen from the following table:

Table-2

Accommodation provided for rural primary schools

Number of schools	Open Space	Tents	Partly permanent buildings	Permanent buildings
342	4	10	146	182
% of total	1.2	2.9	42.7	53.2

To realise the goal of compulsory primary education for all children, schools were opened at reasonable distances. The Fourth All India Educational Survey Conducted by NCERT in 1978 revealed that 86.25 per cent of children have the facility of primary education within the locality and 99.75 per cent within one km. Adequate provision of teachers was made for rural schools which is evident from the following table:

Table-3

	Schools with One Teacher	Schools with Two Teachers	Schools with Three Teachers	Schools with Four Teachers	Schools with Five Teachers	Total
No.	4	19	48	60	211	342
%	1.1	5.5	14	17.5	61.9	100

Adequate provision of schools and teachers has greatly helped to bring more children to schools in rural areas. The enrolment of girls increased from 4,062 in 1950 to 34,030 in 1980. During the same period, the enrolment of boys increased from 19,142 in 1950 to 52,369 in 1980. The enrolment gap has narrowed down, but not to the desired extent. This is because the authorities have not been able to provide separate schools for girls in all villages and many parents are not inclined to send their daughters to co-educational schools. The presence of lady teachers in co-educational schools has, however, encouraged some parents to send their daughters to these schools. It is notable that there are 34.7% lady teachers in rural schools as against 58.69% in urban schools.

The teachers working in primary schools are generally trained as is evident from the following table. The minimum academic qualification for a teacher is now higher secondary. There are, however, teachers with graduate and post-graudate qualifications as well.

Table 4

Qualifications		Men	Women
Middle-Pass	Trained	47	14
	Untrained	—	—
Matriculates	Trained	333	195
	Untrained	1	—
Higher Secondary	Trained	535	319
	Untrained	—	—
Graduates	Trained	425	227
	Untrained	3	—
Post Graduates	Trained	121	36
	Untrained	—	—

The persons with higher qualifications who get selected for appointment as teachers in primary schools generally do not stick to their posts. They keep on trying for selection in secondary schools. Those working with DMC and NDMC try for promotion as trained teachers in the Directorate of Education.

Enrolment

The Fourth All India Educational Survey shows that the enrolment of children in class Ist is about one-fourth of the total enrolment in primary classes as revealed in the following table:

Table-5

Comparative Class-wise Enrolment

Class		Rural		Urban	
I		Enrolment	%of the Total	Enrolment	%of the total in class
I	Boys	11,872	25.2	83,778	24.7
	Girls	9,647	29.0	76,286	26.8
II	Boys	8,694	29.6	70,164	20.6
	Girls	7,125	21.4	62,419	20.9
III	Boys	9,119	19.6	66,746	10.7
	Girls	6,446	19.4	64,067	10.0
IV	Boys	8,817	18.7	62,788	18.5
	Girls	5,733	17.2	49,518	17.3
V	Boys	7,496	15.9	55,437	16.3
	Girls	4,248	12.4	41,941	14.7

The pattern of enrolment is the same in both rural and urban schools. But the percentage of children in class 5th is higher in urban areas as compared to rural areas and that of boys higher than that of the girls. This indicates that more children drop out in rural areas than in urban areas and the girls drop out more than boys. The following table shows the position of drop-outs in Delhi.

Table-6

Drop-outs in Primary-stage of Education(%)

Drop-outs	Boys	Girls	Total
1973-77	16.5	30.0	25.0
1974-75	22.5	30.0	26.8
1975-76	24.4	28.5	26.3
1976-77	24.0	27.0	25.4

It is notable that the percentage of drop-outs among boys has increased whereas it has fallen in the case of girls. The reason probably is that the boys from weaker sections of society give up their studies when they find some remunerative work but the girls once having joined the school stay to complete their studies. In rural areas 26.5% of the total children enrolled in Class Ist drop-out from school. The number of drop-outs in respect of girls is higher as compared to boys.

In rural areas the educational authorities encourage parents to get their children enrolled in schools. Incentives are provided in terms of free text-books, uniforms and midday meals for children from the weaker sections of society. But the efforts have succeeded only partially.

Courses of Studies in Primary Classes

Prior to Independence similar courses were taught both in urban and rural areas. At the beginning of the century, the study of three R's was emphasised, but as years passed the courses were extended to include history, geography, nature-study and hand work. Teachers, however, continued to emphasise academic studies. Though trained, they applied outdated methods in teaching. Those who worked in rural schools worked in isolation. The inspections occasionally carried out in schools were only meant to examine the utilisation of grants. Problems of the teacher or the quality of teaching was hardly their concern.

The introduction of basic education in rural schools after Independence was a step to revolutionise the teaching. But it failed to change the outlook of the teachers even after they had undergone the orientation course. Many of them could not undertake corelated teaching which was a salient feature of basic education. The newly trained teachers understood principles of new education but lacked resourcefulness to imple-

ment them. Quite naturally, the parents were highly critical of the new type of education introduced in the basic schools.

The introduction of the integrated syllabus in 1960 in all primary and basic schools brought about the much needed uniformity. The course content was drawn up centrally for all schools, and teachers were not allowed to include the study of local environment in it. Another important change was the introduction of science teaching. The financial inputs for the purchase of kits were provided by UNICEF. The subject was introduced in a phased manner in 1970 and in the following six years all schools were covered. The Directorate of Education provided orientation training to the teachers for teaching science. The DMC and NDMC appointed special officers for supervising science teaching. Two of the science centres opened by the DMC for this purpose were located in rural areas at Najafgarh and Alipur.

A project to include environmental studies in primary schools was taken up in 1977. It was gradually extended to all schools. Another project relating to curriculum development for primary schools was taken up in 1976 with the assistance of UNICEF and under the supervision of NCERT. In the first phase of the project, thirty schools located in backward areas were covered. Teachers were properly trained for developing and reviewing the curriculum when it was considered desirable. It has now been extended to one hundred more schools, out of which twenty are located in rural areas.

Reorientation of Teachers

In view of the need to reorient teachers an extension centre was set up as a part of Teachers Training Institute in 1960. It served fifty primary schools at a time and provided the much needed orientation to teachers. But owing to large expansion of primary education the number of teachers needing reorientation shot up. The MCD, therefore, set up an in-service institute in 1978. It organises workshops, short term courses and seminars for the teachers working in Delhi schools. NDMC set up an Extension-Cum-Science Centre in 1972 for providing orientation courses to its teachers.

Expansion of Secondary Education

The emphasis on primary education in the First Plan led to an increased demand for secondary education. The Government responded by launching a programme for the construction of school buildings-temporary or permanent. But it could not keep pace with the demand and, therefore, some schools had to be run in tents. Some schools were run in shifts also. The progress of secondary education in Delhi is reflected in the following table:

Table—7

Progress of Secondary Education

Year	Rural Areas		Urban Areas	
	Middle School	H/Hs School	Middle School	H/Hs School
1950–51	15	6	74	69
1955–56	84	41	130	145
1965–66	67	54	421	372
1975–76	58	73	322	534
1980–81	48	81	279	710

All secondary and higher secondary schools which have been opened after Independence have facilities for the education of middle classes as well. The policy has been to upgrade middle schools as and when the demand for higher education increased. After MCD was set up in 1958 it upgraded a number of primary schools to middle schools and also opened new middle schools. This created duplication of facilities when a higher secondary school was opened. To avoid this the Government has now decided to discontinue a middle school as and when a higher secondary school is set up in a village.

The enrolment of both boys and girls in the middle schools in rural areas have shown a great increase. A survey of the available facilities shows that 55.7 per cent of children have the schools within the locality, 31 per cent within one km. and almost all within three km. The provision of separate schools for girls in villages has enabled many girls to continue their education beyond the primary stage. The provision of free transport facilities for girls has also encouraged them to continue their education. The posting of at least two lady teachers in co-educational schools has also encouraged parents to send their daughters to middle schools. In spite of all these facilities, some parents have shown reluctance to send their daughters to co-educational schools. This is borne out from the following table:

Table—8

No. of Girls and Boys in Selected Co-educational Schools

Government Middle Schools	Girls	Boys
Dayalpur	62	273
Sabhapur	16	115
Neb-Sarai	63	95
Naharpur	38	72
Sanoth	52	103
Dera	12	105
Nanakheri	28	113
Mandoli	76	320

Obviously absence of separate girl schools nearer home is a major hinderance in the education of girls.

Higher Secondary Schools

Following the recommendations of Secondary Education Commission, the Delhi Administration decided to upgrade all high schools to higher secondary schools. A few multipurpose schools including one in Ojwa were established in 1960. The experiment of multipurpose schools did not, however, become popular and the Government soon abandoned the scheme.

The growth of the secondary education in the past thirty years is shown in the following table:

Table—9

Number of Higher Secondary/Secondary Schools

Year	Rural Areas			Urban Areas		
	Boys Schools (i)	Girls Schools (ii)	Total No. of Schools (iii)	Boys Schools (i)	Girls Schools (ii)	Total No. of Schools (iii)
1950-51	6	-	6	49	20	65
1960-61	36	5	41	179	99	278
1970-71	45	9	54	305	196	501
1980-81	56	24	80	393	239	632

The acceptance of the recommendations of the Education Commission and their incorporation in the National Policy Resolution in 1968 has drastically changed the pattern of secondary education. Under this, the first public examination was held at the end of Class X and the second at the end of Class XII. The courses of studies upto Class X were revised so as to provide a strong base of general education to all students. The next stage popularly known as plus two stage was introduced with a view to specialisation in academic, vocational or technical education. In this way one more year was added to the school education. In fact, two years have been added to school education in the course of thirty years.

The changeover to the new course started in 1975 and the first public examination was taken by students in 1977. The task of upgradation of selective schools for the senior secondary course and downgradation of others was taken up in 1977 before the new course could be introduced. The first examination in the senior secondary

course was conducted in 1979. The following table gives the position of Secondary and senior secondary schools:

Table-10

Secondary and Senior Secondary Schools

	Rural				Urban					
	Senior Secondary		Secondary		Senior Secondary			Secondary		
	Govt.	Aided	Govt.	Aided	Govt.	Aided	Unaided	Govt.	Aided	Unaided
Boys	33	3	22	2	269	75	45	124	27	25
Girls	11	-	13	-	193	48	6	46	6	2
Total	44	3	35	2	462	123	51	170	33	27

It is notable that senior secondary schools are more in number than secondary schools both in urban and rural areas. This indicates that parents are desirous of providing higher education to their children.

Courses of Studies

The courses of studies at secondary stage included two languages, mathematics, science, social science, physical and health education and one selected area of work experience. The last two namely physical and health education and work experience are evaluated internally. But the gradings given by teachers in these subjects are included in the statement of marks issued by the Central Board. The sciences include physics, chemistry and biology and social science included history, geography and civics. But on the basis of experience some courses of studies introduced in 1975 were curtailed. Two level courses of mathematics and science were introduced owing to the large number of failures in these subjects. Economics and commerce, included in social science were dropped. The pattern of evaluation was slightly changed to indicate fail or pass in the subject. Central Board of Secondary Education has offered one course in science and mathematics instead of two level courses namely A and B from the academic session 1985.

The courses of studies at the Senior Secondary stage are more specific and discipline oriented in the areas of sciences, commerce, humanities, home science and agriculture. Students can opt for a technical course in a technical school or a vocational course along with academic courses in a selected school. Students are required to study a language and three electives. A student may also take an additional subject if desired. The Senior Secondary Schools located in rural areas provide facilities for teaching of subjects such as the humanities, commerce, science and maths. Only a few schools have the facilities for teaching science because not many students qualify for taking up this subject.

Orientation of Teachers

Owing to drastic changes in the courses of studies, both for the secondary and senior secondary classes, teachers had to be suitably oriented. Summer Institutes with financial assistance provided by NCERT were organised to prepare teachers for teaching science subjects, mathematics, history, geography etc. The State Institute of Education and Science Centres took up the responsibility of re-orienting other teachers by organising short courses during the year. This enabled teachers to take up the teaching of new courses with a degree of confidence which could not have been possible otherwise. To find solution to teaching problems, specially in rural areas, the teachers are also being guided to take up some action research.

Science Education

In this age of science, the importance of science education for all children studying in schools needs no emphasis. To begin with, in 1960, general science was introduced as a compulsory subject in the middle classes. Teachers were provided some training for teaching the prescribed course. But when this course, was found inadequate, a decision was taken to introduce an elementary course in physics, chemistry and life science (biology) as a pilot project in 50 schools. After three years of experiment, a decision was taken to introduce the new science course in all schools. Science Centres were utilised for providing suitable training and assistance to teachers in this regard.

A UNICEF assisted programme 'Science is Doing' was introduced in selected primary schools to find out its usefulness. Later the course of studies was modified and has now been introduced in a phased manner in all primary schools. The main purpose of the course is the development of scientific outlook among children.

Television as a media for actual class room teaching in science subjects was introduced in 1961 with a view to improve the quality of teaching in secondary schools. Schools are provided with T.V. sets to enable more and more students to benefit from the lessons imparted by good teachers.

The Science Centres set up in each district help to improve the teaching of science in the schools by organising workshops, seminars and orientation courses and by providing on-the-spot guidance to teachers. Being equipped with standard science apparatus for teaching science at school stage, these Centres provide opportunity to teachers to conduct expermients for the benefit of their students and also help their students to do so on their own. The work in various Centres is planned, coordinated and supervised by Deputy Director of Science and his team of science counsellors and field advisors.

These Centres also organise science fairs in which working science models prepared by students and improvised apparatus are exhibited for the benefit of people. Some science fairs are held in rural areas and 60 per cent of the exhibits there cater to

the needs of rural people. The people invited to these fairs take keen interest in the working models. A number of rural schools participate in zonal science fairs and their models are often selected to compete in state fair.

The Science Centres conduct special programmes for the benefit of students of rural areas. They also undertake research studies with a view to solving the problems experienced by these students. A project on environmental studies for primary classes was taken up in 1979 to encourage science based activities in rural schools. The syllabus has now been introduced in forty rural schools. Teachers working in these schools have been trained for using locally available material and even waste material for teaching science concepts.

The textual material produced by NCERT both for primary and middle classes is being tried in rural schools to judge its suitability for them in view of the restrictive environment and other limitations. After the experiment is over, it may be possible to develop suitable textual material for rural schools.

Social and Adult Education

Following a Government decision to educate the masses for strengthening the roots of democracy, the Directorate of Education took up the responsibility of adult education in rural areas soon after Independence. The programme concentrated on providing social education. A provision of suitable books for the neoliterates was also made. A journal entitled '*Hamara Gaon*' was published regularly for their use. Three public libraries were set up at Najafgarh, Mehrauli and Alipur to provide suitable reading material for the educated people. Social education centres for men and women located in villages were also equipped with facilities to learn skills like tailoring, knitting and embroidery. The educational caravan which moved from village to village provided knowledge on community health, agriculture sanitation and community development with the help of films, talks and discussions. By combining recreation with education, it was intended to attract more people. But the interest of adult learners could not be sustained for long.

To educate the rural yourh, clubs and *Mahila Mandals* were established and financial and organisational assistance was provided to them by the Directorate of Education. The members of these clubs helped in various developmental activities such as road building, sanitation work and literacy drive and organised sports and games. The Nehru Kendras set up in selected areas in recent years provide training to rural youth to enable them to take remunerative work and inculcate fellow-feeling among them.

The farmers functional literacy programme which was introduced with the financial assistance of the Government of India created a little stir in some villages, but did not enthuse the right type of people to come forward to take up the responsibility of running the centres meant for this purpose.

Adult education was introduced in rural areas of Delhi with great vigour in 1979. Under this programme, three hundred centres were opened with the help of local educated youngmen and women. The aim was to spread social awareness and to improve functional skills among rural adults. Over four thousand men and women were helped to acquire literacy skills in the course of two years. The children who did not enroll themselves in primary schools were also included in the non-formal education centres in some Blocks to enable them to receive some education. This suited the convenience of those parents who could not spare their children for receiving education in formal schools.

Teachers Training

Before Independence Delhi had two teachers training schools—one at Najafgarh and the other (for women) at Daryaganj. When a decision was taken to introduce basic education in schools in Delhi, the training institute for women changed over to the new pattern. The arrangement for the training of male teachers was made in Ajmer. But owing to the pressing demand for training of untrained teachers, recruited for schools which had to be opened for displaced children, another training school was set up at Alipur. It also provided training facility in the evening to those who had to work in schools during the day. When the backlog of training untrained teachers was cleared, the school was given the responsibility of training fresh teachers. The reduced demand for teachers subsequently led to the merger of both the institutes in 1969. The institute has a reservation of seats for men and women from rural areas and for members of scheduled castes. A nursery teachers training section was added to it afterwards

Teachers for secondary schools are trained in the Central Institute of Education founded in 1948. It has now been taken over by the University of Delhi. Lady Irwin College affiliated to the University of Delhi trains teachers in Home Science. Teachers' College of Jamia University has also been imparting teachers training for some years. Trained teachers from the neighbouring states of U.P., Haryana, Punjab and Rajasthan are also attracted to Delhi for reasons of better service conditions.

State Institute of Education

In this fast changing world of education, no training programme can serve teachers for their entire career. The need for regular inservice training for teachers was, therefore, recognised to keep them in touch with new techniques of teaching. With this in view the Institute of Education set up the State Institute of Education in 1966. Refresher and reorientation courses are conducted by the Institute to familiarize teachers with the new developments in the field. The Institute has also worked to improve the courses of studies and the text books which are prescribed in the schools.

Agriculture as a School Subject

Agriculture had no place in the school curriculum before Independence. There were conflicting views on including agriculture in the school courses. In 1944 the Advisory Board of the Imperial Council of Agirculture Research, however, favoured the teaching of nature study in primary classes. After Independence I various Education Committees and Commissions favoured the teaching of agriculture as a subject in schools.

The Secondary Education Commission recommended that agriculture should be included in the diversified courses at the higher secondary stage in view of its importance in the economy of the country. When the Delhi Administration decided to have a few multipurpose schools, Ujwa, was selected for introducing agriculture as a subject at the higher secondary stage. A number of other schools in rural areas also introduced agriculture as an elective subject. Agriculture continued to be offered as an elective subject even after the scheme of multipurpose schools was given up in 1965. The following table shows the number of students who opted for agriculture as a subject in various rural schools.

Table-11

Number of Students Opting for Agriculture

Year	No.
1975	1645
1976	1453
1977	1573
1978	—
1979	85
1980	308

The Education Commission (1964–66) laid great zmphasis on teaching of agriculture in schools in rural areas to familarise the students with the application of science and technology in agriculture with a view to preparing them for taking up scientific farming. It favoured the inclusion of agriculture as a vocational course. No school located in rural area could introduce the course under the new pattern for want of requisite number of students. The position of agriculture as a subject of study in school stage can be seen from the following table:

Table-12

Current Position of Agriculture as a Subject

Type of schools	No. of rural Schools	No. of schools offering agriculture	No. of students taking it
Secondary	50	20	476
Secondary	35	33	2168
Middle	49	15	1278

It may be stated here that at the secondary stage, students take up agriculture as a work experience. The valuation is done internally and, therefore, students do not take up the study of the subject seriously.

Vocational Courses at Plus-2 Stage

As a result of the recommendations of different education commissions, the vocational courses have been started in senior secondary schools of Delhi. Central Board of Seconary Education has offered the vocational courses in commerce, engineering, home science and agriculture groups. Besides these, health care and beauty culture, opthalmic technique course and pharmacy course have also been offered by the C.B.S.E. Vocational courses in stenography and horticulture are run in some rural senior secondary schools.

Physical Education

In view of the importance of physical education for all-round development of the young, it has been included as a compulsory subject in all stages of school education. Under the new pattern of education, it was included as elective subject along with health education in the secondary stage. Every middle and secondary school has at least one qualified teacher to organise suitable programmes of physical education in the school. To ensure proper physical education every educational zone has a supervisor for physical education.

Schools are provided the necessary equipment for purpose and they are expected to supplement it by purchasing more out of the boy's fund. All rural and urban schools have some playing grounds and the Administration helps in maintaining them. Regular tournaments are conducted at zonal and district levels in which a large number of students get opportunity to participate. Those who show some promise are given proper coaching to improve and participate in organised competitions. Sports are conducted separately for rural youth below the age of sixteen, to promote their interest. The winners are awarded cash prizes. Physical efficiency tests are conducted every year and efforts are made to encourage the young to attain higher physical standard. Students are taken out on excursions and educational tours are organised even outside Delhi. A number of rural schools participate in national integration camps organised by NCERT at the initiative of Government of India in different parts of the country.

The Delhi Administration has set up a Delhi Council of Sports to encourage the youth to take up various sport activities. Young men and women from rural areas of Delhi have shown great interest in organised team games and individual items. The *Vyayamshalas* provide facilities for regular exercises. The council also gives scholarship to outstanding sportsmen.

Girl's Education

The education of girls in rural areas received special attention after Independence. Separate girls schools were opened wherever possible, to encourage their enrolment.

But still there is much scope for improvement in this field. The ratio of enrolment of girls in primary classes in rural and urban areas is 41 per cent and 45 per cent of the total respectively. In middle classes it is 30 per cent and 42 per cent and at the secondary stage 27 per cent and 43 per cent of the total.

In spite of the efforts made to encourage the education of girls in rural areas by opening separate schools, by providing free transport facilities in some schools and by appointing at least two lady teachers in all co-educational schools, education of girls has continued to lag behind. This is mainly because of the indifference of parents towards the education of their daughters and their reluctance to send them to co-educational schools. Some parents even object to their daughters going to school in a bus. Social backwardness thus comes in the way of the education of girls.

Equal Educational Opportunities

To help the education of the weaker sections of society living in rural as well as urban areas, the Government has made considerable efforts. The tution fee upto class VIII was abolished in all Government and aided schools in the Second Plan period. Text books are supplied free of cost to children coming from weaker sections of society in primary classes. Book-banks have been set up in all middle and secondary schools from where text books can be obtained on loan. These measures have helped quite a large number of children of rural and urban areas to continue their education beyond the primary stage. The supply of free school uniforms to poor children has also removed another hurdle in the way of the education of the young.

The programme of scholarship for bright students of rural schools has enabled many to continue their education upto the end of the school stage. The scheme for giving cash allowance to students of scheduled castes and econmically backward sections of society has also proved helpful. Senior students belonging to poor homes can take the advantage of the loan scheme for higher studies. In this way, many handicaps in the growth of education have been over-come.

Students who find it difficult to study at home can utilise the special facilities provided in school premises after the normal school hours. Guided studies help them to solve their problems. The study camps organised in rural schools before the annual examination under the care of experienced teachers are also beneficial to students.

Administration of Education

The great expansion of education could not have been possible without effective and efficient administrative set up provided by the Directorate of Education, Delhi Municipal Corporation and New Delhi Municipal Committee. The direction and inspection wing have been strengthened considerably over the last thirty years. The

entire approach to educational administration has undergone a change with the Government taking up the responsibility of organising and managing schools. The Government also sanctions grants to institutions run by the private management.

The local bodies look after the primary education in areas under their jurisdiction whereas the Directorate of Education looks after the secondary education. With the setting up of Delhi Municipal Corporation in 1958, compulsory education upto the age of fourteen, as laid down in the Directive Principles of State Policy, was entrusted to it. The Directorate of Education, however, continued to shoulder the responsibility of selecting the courses of studies from Class I to VIII, prescribing text-books and laying down qualifications of teachers. The courses for the secondary education are laid down by the Central Board of Secondary Education to which all schools in Delhi are affiliated (the Delhi Administration wound up its Board of Higher Secondary Education in 1955). The Board conducts the secondary and senior secondary examinations for all schools in Delhi.

The day to day administration of Delhi schools was carried in accordance with Punjab Education Code till it was replaced by Delhi Education Code in 1965. But to over come the difficulty in enforcing the code on privately managed schools, the Govt. of India passed the Delhi Education Act in 1973. The administration of Delhi schools is now regulated by the rules framed under this Act.

To strengthen the Directorate of Education, three posts were created soon after independence. First was for admininistrative and personnel matters of teachers, the second for social education programmes of the Administrasion and the third for the work connected with planning and development of education. A post of Duputy Director of Education was created in 1956 to assit the Director of Education in his multifarious responsibilities. Additional posts were created for taking up responsibilities connected with school buildings and their maintenance, television programmes, science education, physical education and welfare programmes for teachers. In view of the heavy load of administrative work, a post of Joint Director of Education was created in 1963. To share the academic responsibilities of the Director a post of Additional Director of Education was created in 1969. The strengthening of the Directorate has helped to improve the quality of education imparted in schools both in rural and urban areas.

The inspection wing of the Directorate was also strengthened as and when the need for it was felt. Initially, the post of Assistant Inspector were created to assist the Assistant Director for girls education and two Inspectors of Schools. With the expansion of secondary education, the need for morese nior posts was felt to assist the Director in inspection work.

Three educational zones were created in 1959 and in each zone the responsibility for the education of girls was entrusted to a senior lady officer. In all, six Education

Officers were put in charge of the zones and Deputy Education Officers, were appointed to assist them. The rural schools were put in different zones according to their location. Another zone was created in 1964 when the number of schools increased. This enabled teachers of rural schools to exchange ideas and share experiences with their colleagues working in urban schools. The students also got a chance to compete with students of urban schools.

In 1967, a very important decision was taken to establish three educational districts to coordinate the work of zones. Each district was put under the charge of a Deputy Director, Education, who was delegated supervisory and administrative powers of the Director of Education. The delegation of responsibility not only helped to improve the administration of the schools but also the quality of education. Another educational district was created in 1976 for administrative convenience.

One post of Additional Director of Education was created in 1978 when the National Adult Education programme was taken up by the Administration. Two more posts, one of a Deputy Director and the other of an Assistant Director were also created to help him. Another post of Additional Director of Education was created in 1980 for research and development work. All academic work relating to improving the quality of teachers which was being undertaken in State Institute of Education, Science Centres, Text-books and Television Branches was brought under the Council of Educational Research and Training headed by him. Another post of Additional Director of Education for strengthening the administration of schools was also created in the same year.

Administration and Supervision of Primary Schools

Before the Delhi Municipal Corporation was set up in 1958, Delhi Municipal Committee had an Education Officer and some School Inspectors to supervise the primary education. The supervisory staff of the Directorate of Education also inspected the primary schools of DMC/NDMC and Notified Area Committee and the Cantonment Board to ensure uniformity of educational standards. With the establishment of the Corporation, the administration of primary schools was decentralised. An officer was put in charge of education in each zone and he was assisted by School Inspectors. When some middle schools were set up, posts of Senior School Inspectors were created. A post of Deputy Education Officer was created to assist the Education Officer. Subsequently, many posts of Assistant Education Officers were created to look after administration, planning, examination, physical education and construction works. There are three Senior Inspectors at headquarters to supervise mid-day meal programme, science education and physical education. A post of Attendance Officer has been created recently in each zone to ensure that no child of school-going age is left behind at home.

-The New Delhi Municipal Committee has its own supervisory staff for its primary schools. Early in 1960 it appointed an Education Officer. It also appointed two Deputy Education Officers and an Officer for Science Eductation. At present there are four Deputy Education Officers. Physical education progr amme in schools is looked after by a Deputy Education Officer.

School Health Scheme

School Health Scheme was started as a pilot project in 1979 to cover about 53,000 school children in trans-Yamuna region of Delhi. The scheme has been expending every year rendering comprehensive health care to the school children and now about 3.5 lakhs school going children are covered under the scheme in both urban and rural areas of Delhi. Presently, the school health scheme functions in a net work of 64 School Health Clinics, each catering to a cluster of adjoining schools. MCD and NDMC also provide school health services in their areas.

About the recent developments in the field of education in rural Delhi, it may be said that the Education Department has provided schools within easy reach of the children living in villages. Each school has its own building, playground, water and sanitation arrangement, as well as electricity. Free transport facilities are provided to girl students living in rural areas. The number of such girls was 3800 in 1983-84. It is notable that all these schools are well staffed.

The Department is also running 68 regular (female) and 25 part-time (male) Social Education Centres in the rural areas of Delhi. Under the Rural Functional Literacy Project, 2300 Adult Education Centres covering three Community Development Blocks of Alipur, Nangloi, Najafgarh and 70 non-formal Education Centres for drop-out children are also functioning. In short, the progress of education in rural Delhi can be called satisfactory.

CHAPTER XIV

LAW AND ORDER AND JUSTICE

The term police means a system of regulations for the preservation of order and enforcement of law, the internal government of a state. In Europe the police means a force responsible for law and order in the city. The term police thus came to be related with the city because the incidence of crime was primarily a city phenomenon. In ancient India the person responsible for such duties in the city was called, *Nagarpal.*

Native Police System

The earliest reference to some sort of police system in India is traceable in the Vedas. In the *Ramayana,* there are definite references to watchmen in Lanka as well as in Ayodhya. The *Arthashastra* and the *Manusmriti* give a detailed description of the police system. During the Sultanate period an officer known as *Diwan-i-Mazalim* performed police functions with the help of *Cadias.* Another officer named *Amir-i-dad,* assisted by a *Muhtasib* supervised and coordinated the work of *Kotwals. Kotwal* was the most vital link of the police administration in medieval India. During the Mughal period the responsibility of police administration in the provinces lay with the *Subedar, Fauzdar* and *Thanedar* in descending order. The *Kotwal* retained his important position in this set up but he was basically an urban officer. Mughal *Kotwal* maintained a big establishment to carry out his police-cum-judicial duties.

Prior to the advent of the British this was generally the shape of the police system in India. In this scheme of things the village did not attract much attention firstly because the incidence of crime was negligible there and secondly the strong village *panchayats* could deal with law and order problem adequately. The village headman and the watchman were the two important links in village police administration from the earliest times. In this connection the conclusions arrived at by Shri J.C. Curry are worth noting. "The idea which we have already seen to be the basis of Indian indigenous police system survived unchanged till Mughal times. The villages were still left responsible for their own safety and that of travellers within their limits. A Mughal province was a replica of the empire, and provincial government centred in the provincial capital. Outside that the people were left alone as long as they paid their revenue and did not disturb the peace."[1]

This indigenous police system continued as long as the Mughals maintained effective hold over the administration of the country. But with the slackening of this control, the police system passed under the *Zamindars* who used it for their own benefit. This led to complete breakdown of the police system.

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1. Curry, J.C., *The Indian Police,* p. 90.

Early Company System

With the rise of the East India Company's territorial acquisitions in eastern India, the British troops were confronted by the law and order problem in the country. The Governor General Warren Hastings with a view to arrest the declining law and order situation restored the Mughal *Fauzdar* and *Thanedar* system. The *Zamindars* and tax farmers were asked to assist *Fauzdar* in all matters relating to his jurisdiction.

The system did not, however, prove effective in curbing the crimes and in 1814 the Court of Directors favoured the maintenance of the old village police system as the best means of ensuring internal peace. In the words of Thomas Munro the then Commissioner of Madras "we have now in most places reverted to the old police of the country, executed by village watchmen, mostly hereditary, under the direction of the heads of the villages, *Tehsildars* of districts and the collector magistrate of province".[1]

A radical change in the police system was introduced by the Police Act of 1861 which is still in force in India. It envisaged the organisation of police on provincial basis under an Inspector General of Police, on the model of British Constabulary Forces. It also laid down a uniform police system for the whole country. The British rule in Delhi started in 1803 after the defeat of Marathas in the battle of Patparganj at the hands of Lord Lake. The police system introduced by the Britishers here followed the pattern of other provinces.

Police System Before 1912

Before becoming the Capital of India in 1912, the territory of Delhi was under the control of Punjab police. Under this system *Lambardars* looked after the police function. In villages with more than one *Lambardar*, an *Ala-Lambardar* was appointed as the Chief Headman. During 1878-80, the position regarding *Lambardars* and *Ala-Lambardars* is detailed in the folloing table at page 343.

This arrangement did not however, work well owing to jealousy among the *Lambardars*. Consequently the *Lambardars* were made jointly responsible in their duties and a superior officer designated as *Zaildar* or *Inamdar* was appointed to supervise their work. *Inamdar* or *Zaildar* was made duty bound to report crimes, assist in the investigation and prevention of crimes and arrest of criminals. The Officers used to get remuneration for their services in the rural areas. The posts of *Zaildars* and *Ala-Lambardars* were however, gradually

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1. Curry, J.C., *op. Cit*, p. 38.

Statement of Ala-Lambardars, Delhi District.[1]

Tehsil	No. of villages in the *Tehsil*	No. of villages in which *Ala-Lambardars* have not been appointed. The No. of *Lambardars* being under these each	No. of villages requiring the appointment of *Ala-Lambardars*	No. of villages in which *Ala-Lambardars* have been appointed.	New Jama of villages in which *Ala-Lambardars* have been appointed	Fees due to *Ala-Lambardars* at one per cent.	Villages with three *Lambardars* in each	Villages with four *Lambardars* in each	Villages with five *Lambardars* in each	Villages with six *Lambardars* in each	Villages with more than six *Lambardars* in each
					R	R					
Delhi	288	179	109	107	170126	1708	38	32	15	11	13
Sonipat	239	95	144	144	266312	2674	44	44	22	15	19
Ballabhgarh	283	181	102	98	134943	1355	37	38	10	7	10
Total	810	455	355	349	571381	5737	119	114	47	33	42

1. *Final Report on the Settlement of Land Revenue in the Delhi District, carried in 1872-77 by Oswald Wood, Esq and Completed in 1878-80, by R. Manachie* Eqq C.S. Lahore Co 1882, p. 269

abolished in view of economic considerations. It was also felt that their appointment did not bring any extra efficiency.

The police force of Delhi District was under the command of a Superintendent whose immediate subordinates were an Assistant Superintendent and a Deputy Superintendent. There were two Inspectors, 27 Sub-Inspectors, 110 Head Constables, 985 Foot Constables and 27 Sowars. The rural police were in the special charge of two Inspectors with their headquarters at Sonepat and Ballabhgarh. It was distributed in 10 *Thanas* as follows:

Tehsil Sonepat	*Tehsil* Delhi	*Tehsil* Ballabhgarh
Larsauli	Alipur	Mehrauli
Sonepat	Nangloi	Faridabad
Rai	Najafgarh	Ballabhgarh
		Chhansa

Each *Thana* comprised one Sub-Inspector, two Head Constables and 10 Foot Constables. Larsauli was an exception with an extra-sub-Inspector and two extra Constables. The Police force was recruited locally and included a fair proportion of Punjabi Muhamadans. The strength of Police in the Delhi district in late seventies was as follows:-

The Police Force of the Delhi District 1879-80[1]

	Inspectors			Deputy Inspectors			Sargeants			Constables			Total of all grades
											Foot		
Class	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	Mounted	1st	2nd	
Imperial	—	—	2	3	5	7	10	22	34	30	327	102	542
Municipal	2	—	—	1	—	3	6	17	33	—	327	202	591
Cantonment	—	—	—	—	—	2	—	4	2	—	—	2	11
Supplied to private companies	Details not given											13	13
Total	2	—	2	4	5	12	16	43	69	30	654	319	1,157

1. Bedon, H.C.- *Final Report of the Third Regular Settlement of the Delhi District, 1906-10, Lahore, 1950.*

Delhi *Tehsil* consisted of the police areas of Subzimandi, Alipur, Nangloi Jat, Najafgarh and Paharganj which maintained law and order in the villages falling in their jurisdiction. The details may be seen in the table given below:

Statement showing Police Station and Police Force in the Delhi District 1878-80[1]

Tehsil Police force	Villages on the boundry of each stations	Area in square miles			No. of villages	No. of village watch-men	Outposts and their strength
		Culti-vated	Unculti-vated	Total			
DELHI							
1. Subzimandi Dy. Inspector–1 Sergeants–5 Constables–42	13	6	16	22	17	9	1. Nehaldar Khan in Sadhara Kalan III Class Constables–3.
2. Alipur Dy. Inspector–1 Sergeants–2 Mounted Constables–1 Constables–12	45	90	66	156	97	112	1. Mukbara Park in Badli 2. Nagli 3. Bankauli 4. Sanghaula 5. Nathupur, Class IV 3. Constables in each.
3. Nangloi Jat Dy. Inspector-1 Sergeants–2 Mounted Constables–1 Constables–12	31	74	26	100	55	53	1 Sarai Sitaram in Basai Darapur, II Class Mounted Constable–1. Constables–4. (2) Garhi Miran, III
4. Najafgarh Dy. Inspector–1 Sergeants–2. Mounted Constables-1 Constables–12.	42	80	33	113	78	65	class constables-3 (3) Mundka, II class constables-3 (4) Tikri, II class constables–4.
5. Paharganj Dy. Inspector–1 Sergeants–5 Constables–43	23	15	15	30	29	55	(1) Tihar, II class Lance–1, Constables-401. Nizamuiddin in Ghyaspur, II class Sergeants–1 Constables-5.

1. Final Report on the settlement of Land Revenue in the Delhi District, 1978-80 Appendix No. 5 pp- L XII to X CIX.

Chowkidars were employed to report and prevent crimes and their number in each village was determined by the size of the village and behaviour of the inhabitants. There were in all 944 *Chowkidars*, an average of 1.22 per village. Besides normal *Chowkidari*, there was also the system of *Tikri Chowkidari* under which *Chowkidars* were helped by the villagers on dark nights in crime prone localities.

The *Tehsil*-wise distribution of *Chowkidars* was Sonepat 346, Delhi 306 and Ballabhgarh 292. The distribution of the more important castes among the *Chowkidars* was Fakirs 164, Gujars 77, Brahmins 67, Sheikhs 62, Jagis 63. Gujars were employed in Gujar villages only. There were 44 villages which were not big enough to maintain a *Chowkidar* by themselves. The villagers, therefore, performed the duties of *Chowkidar* themselves.[1]

The pay of a *Chowkidar* ranged between Rs. 24 to Rs. 36 per annum. In some villages it was still lower. *Dafadars* received between Rs. 72 and Rs. 96 per annum as pay. The *Chowkidari* system, as reported in the Police Commission Report of 1902, was working well. Report however recommended that in order to establish the village police system more firmly, the village headmen should be gradually entrusted with disposal of petty cases.

Between the years 1897-98, 17 cases of riots, 25 cases of murder, 11 cases of culpable homicide, 9 cases of kidnapping and two cases of dacoity were reported to the Police. Besides there were cases of cattle theft also which are given in the following table:

Statement of Cattle Strayed and Recovered during 1898-99[2]

		Baffaloes		Baffaloes & cows		Camels		Horses Ponies Mules		Donkeys		Sheep and Grades.	
		Strayed	Recovered	S	R	S	R	S	R	S	R	S	R
Delhi	1898	239	40	303	35	12	—	68	20	27	2	14	6
Delhi	1899	177	53	142	32	22	1	51	10	17	2	89	1

The number of crimes marginally decreased during 1898 chiefly due to fall in prices and better harvest. Good relations between Hindus and Muslims also contributed to this.[3]

1. Beadon, H. C. *Opcit*
2. Report on the Police Administration in the Punjab for the year 1898, Lahore 1899, p 24
3. *Ibid*, Appendix p VIII

132 cases of crime of class I nature, 822 of class III, 20 of class IV, 4238 of class V and 2591 of class VI nature were reported from 1901 to 1905 in the Delhi district.

The strength of police during 1911-12 was as follows :

Statement showing sanctioned strength of Police in the year 1911-12[1]

	No. of IG and D.I.G.	No. of Spdts.	No. of Assts. Spdts.	No. of Dy. Spdts.	No. of Inspectors	No. of Sub-Inspectors	No. of Sergeants	No. of Head constables			No. of constables			Total
								Foot	Water	Mounted	Foot	water	Mounted	
Delhi 1911	—	1	2	1	6	26	--	110	—	2	981	—	26	1,155
Delhi 1912	—	1	3	3	6	26	15	122	—	5	1099	—	45	1,325

Metropolitan System

After the separation from Punjab in 1912, a change was introduced in the police system of Delhi. It now became a Province and the Chief Commissioner was vested with the powers of the Inspector General of Police also. The police force was again reorganised in 1946 and the posts of Superintendent and Deputy Superintendent were created. The post of Inspector General of Police for Delhi was sanctioned in 1948.

The following statistics show the large expansion of Police force in Delhi since 1947:

	Particular items of comparision	Total no. before partition	Total no. after partition as at present
1.	Strength of G.Os.	12	33
2.	Strength of N.G.Os.	3453	8027
3.	Total No. of Police Stations	18	18
4.	Total No. of Police Post	14	32
5.	Total No. of Rifles/Musket on charge	1215	4926
6.	Transport Fleet	43	145
7.	Wireless Transmitting sets	3	25
8.	Annual Budget	3287340	6021133

After Independence for the purpose of policing, the whole Union Territory was divided into 18 Police Stations and 32 Posts. These Police Stations and Posts were grouped into three areas i.e., (1) Old Delhi (2) New Delhi and (3) Rural, each under

1. Report of Police Administration in Punjab for the year 1911-12, Lahore Appendix p XII (1911-12).

the charge of a Superintendent of Police. A crime Investigating Agency under the charge of a Deputy Superintendent Police of was established to deal with special matters affecting more than one Police Station.

This was the general police set up which dealt with the urban as well as rural areas of Delhi. The growing urbanisation has, however, greatly changed the character of rural Delhi. Even Alipur, Narela, Mehrauli, Nangloi and Najafgarh Police Stations with pre-dominantly rural population were faced with crimes of urban nature. A reorganisation of this set up was therefore, made necessary. The old *chowkidari* system in villages had been abolished earlier.

The introduction of Commissionerate system on 1st July 1978 brought about a change in police system in rural Delhi. Under the system the Union Territory of Delhi has been treated as one unit for the purpose of police administration. The rural areas of Delhi have been brought under the administrative control of the six Police Districts via. East, West, North, South, Central and New Delhi.

East Delhi District covers the trans-Yamuna area consisting of Shahdara, Seemapuri, Gandhi Nagar and Shakarpur residential localities. The West district is spread over Rajouri Garden, Tilak Nagar, Janakpuri, Goman Hera and Ujwa. The North District covers Alipur, Narela, University and Old Secretariat complex. The South District covers Mehrauli, Badarpur and Delhi-Haryana border. The Central and New Delhi Districts are totally urban police Districts.

Each District has been divided into two to five sub-divisions, headed by an officer designated as Asstt. Commissioner of Police. Generally, a sub-division covers three police stations. Each police station is headed by a senior police Inspector and covers an area between 10 to 16sq. km.

We have some recent data on the Police system obtaining in the North Delhi District, which has a large concentration of villages. Police Stations of Alipur, Narela, Kingsway Camp, Adarsh Nagar, Jahangirpuri and Police Posts of Samaipur, Bawana and Timarpur look after the police needs of the entire rural area of the District. The distribution of villages Police Station and Police Post wise is given below:-

POLICE STATION, ALIPUR

(1) Tikri Khurd
(2) Mukhmail Pur
(3) Budh Pur
(4) Khera Kalan & Khera Garhi
(5) Alipur and Alipur Garhi
(6) Jind Pur
(7) Kadi Pur
(8) Kushak No. 1 and 2.
(9) Ibraham Pur

(10) Mukand Pur
(11) Nangli Poona
(12) Sarup Nagar
(13) Bakhtawar Pur and Bakhtawar Pur Garhi
(14) Tigipur
(15) Mohamad Pur
(16) Ramjan Pur
(17) Hiranki
(18) Hiranki Kushak
(19) Akbar Pur Mazra
(20) Palla
(21) Kulak Pur
(22) Jhangola and Jhangola Society
(23) Bakoli
(24) Hamid Pur
(25) Singhu
(26) Taj Pur Kalan
(27) Sunger Pur
(28) Khan Pur

POLICE POST, SAMAI PUR

(1) Samai Pur
(2) Badli
(3) Siras Pur
(4) Shahbad Daulat Pur
(5) Libas Pur
(6) Pahlad Pur
(7) Raza Pur
(8) Kankar Khera

POLICE STATION NARELA

(1) Narela
(2) Bankner
(3) Lampur
(4) Ghoga
(5) Sanoth
(6) Kureni
(7) Bhor Garh
(8) Shah Pur Garhi
(9) Holumbi Kalan
(10) Holumbi Khurd

(11) Khera Khurd
(12) Naya Bans
(13) Singhola
(14) Ganga Toli

POLICE POST BAWANA

(1) Bawana
(2) Pooth Khurd
(3) Sultan Pur
(4) Barwala
(5) Chand Pur
(6) Salab Pur Majara
(7) Budhan Pur Majara
(8) Jat Kher
(9) Katewara
(10) Mungesh Pur
(11) Auchandi
(12) Harewli
(13) Dariya Pur
(14) Nangal Thakran
(15) Bajit Pur

POLICE POST TIMAR PUR

(1) Burari
(2) Jagat Pur Burari
(3) Jharoda Majra (Burari)

POLICE STATION KINGSWAY CAMP

(1) Malik Pur
(2) Dhaka
(3) Dhir Pur

POLICE STATION, ADARSH NAGAR

(1) Sarai Pepale Thala
(2) Bharola

POLICE STATION JAHANGIR PURI

(1) Sahipur
(2) Sahi More
(3) Haiderpur
(4) Singer Pur
(5) Ram Garh
(6) Bhalswa

The strength of each of these Police Stations and Police Posts is given in the following table:-

Rural Police Station/Post	*Strength of the Police Station and Police Post*	
Alipur	Inspector	1
	SIs.	2
	ASIs.	2
	Head Constables	10
	Constables	43
Narela	Inspector	1
	SIs.	3
	ASIs.	4
	Head Constables	12
	Constables	55
Bawana	Inspector	—
	SIs.	1
	ASIs	2
	Head Constables	1
	Constables	12
Timar pur	Inspector	—
	SIs	1
	ASIs.	2
	Head Constables	1
	Constables	12
Kingsway Camp	Inspectors	1
	SIs.	11
	SIAs	6
	Head Constables	18
	Constables	109
Adarsh Nagar	Inspector	1
	SIs.	8
	ASIs.	5
	Head Constables	17
	Constables	67
Jahangir Puri	Inspectors	1
	SIs,	9
	ASIs.	6
	Head Constables	24
	Constables	119

The Police system obtaining in the West District is also similar to that of North District. The whole rural area is covered by the Police Stations/Police Posts of Vikas Puri, Nangloi, Sultan Puri, Mangol Puri, East Uttam Nagar and Najafgarh for the purpose of policing. The distribution of villages under the North District, Police Station and Police Post wise, is given below:-

POLICE STATION/POLICE POSTS

VIKAS PURI

1. Hastsal
2. Nawada

NANGLOI

1. Nilothi
2. Ranholla
3. Nangloi Jat
4. Kamruddin Nagar
5. Tikri Kalan
6. Peera Garhi
7. Jawala Heri
8. Hiran Kundna
9. Tilakpur Kotla
10. Bakerwala
11. Mundka
12. Neelwal
13. Nangloi Sayed
14. Baprolla

SULTAN PURI

1. Pooth Kalan
2. Kirari
3. Mubarakpur
4. Begampur
5. Rasulpur
6. Majra
7. Ghewra
8. Sawada
9. Randhala
10. Jonti
11. Punjab Khor
12. Qutab Garh
13. Prem Nagar
14. Nithari

15. Rani Khera
16. Madanpur
17. Karala
18. Kanjhawala
19. Nizampur
20. Garhi
21. Ladpur
22. Tatesar
23. Jhimar Purat

MANGOL PURI

1. Sultan Pur Majra
2. Mangolpur Khurd
3. Mangolpur Kalan
4. Nahar pur
5. Rethala

EAST UTTAM NAGAR
(Under PS Janak Puri)

1. Matiala
2. Binda Pur

NAJAFGARH

1. Najafgarh
2. Surakhpur
3. Jharoda
4. Nangli Sakrawat
5. Goyela
6. Pandwala
7. Asalatpur
8. Sikarpur
9. Kharakhari Nahar
10. Kharkhari Jatmal
11. Ghumnehra
12. Mitrau
13. Surehra
14. Japharpur
15. Ujwa
16. Dariyapur
17. Rawta
18. Daurala
19. Mudhela Khurd
20. Kajipur

21. Dhansa
22. Bijwasan
23. Chhawla
24. Badusura
25. Nankheri
26. Bharthal
27. Ambarhai
28. Dhulshirish
29. Kutuwapur
30. Dindapur
31. Khera
32. Dichau Kalan
33. Paprawat
34. Kakrola
35. Rewla Khanpur
36. Pandwala Kalan
37. Daulatpur
38. Jhatkara
39. Kharkhari Rondh
40. Hasanpur
41. Jhuljheri
42. Khair
43. Khera Dabar
44. Samaspur
45. Milakpur
46. Sarangpur
47. Galibpur
48. Mundhela Kalan
49. Bakar Garh
50. Issapur
51. Kapashera
52. Banmoli
53. Kangheri
54. Raghopur
55. Salepur
56. Shahabad Mohmadpur
57 Baghdola
58. Pochanpur
59. Shahpur
60. Tajpur

The strength of each of these Police Stations/Police Posts is given in the following table:-

Strength of Police Station/Police Post

Rural Police Station,	Inspector	Sub-Inspector	Asstt. Inspector	Head Constable	Const.
PS Vikas Puri	1	4	4	16	59
PS Nangloi	1	7	2	11	82
Sultan Puri	1	4	3	18	69
Mangolpuri	1	6	2	14	62
PP East Uttam Nagar	Strength of PS Janak Puri				
(under PS Janak Puri)	1	9	3	27	104
PS Najafgarh	PP is looked after by the PS Staff.				
	1	3	5	14	64

The policing system obtaining in rural areas under various Police Districts is almost the same. To illustrate each police station is responsible for the law and order in the villages falling under its jurisdiction. In the case of Alipur Police Station the entire area is divided into two beats. One beat constable patrols in each beat from 10 AM to 3 PM. Thereafter beat constables jointly patrol the area with a senior from 6 PM to 10 PM. During the night i.e. from 10 PM to 4 AM the entire rural belt is covered by a motor cycle borne patrol equipped with wireless set. Besides this, a STF van with one Head Constable and three Constables conduct patrolling on Ring Road and Burari Road as most of the villages in the area fall around these roads. To compensate for the inadequate police staff *Thikri Phera* has also been introduced in some rural areas. The villages falling under the jurisdiction of Jahangir Puri Police Station are also divided in to beats. In fact beat constables are deployed for day patrolling and night patrolling in almost every village in all Districts.

The crime pattern obtaining in rural police stations of Alipur, Delhi Cantt., Najafgarh, Mehrauli, Nangloi and Narela during 1964-66 is reflected in the following table:

POLICE STATION, ALIPUR

S.No.	Crime Head	1964	1965	1966
1	2	3	4	5
1.	Dacoity	—	—	—
2.	Murder	1	3	3
3.	Attempt to Murder	2	—	—
4.	Robbery	1	—	1
5.	Riots	2	2	2

1	2	3	4	5
6.	Burglary	27	29	18
7.	Thefts	52	59	66
8.	Misc. IPC	69	52	69
9.	Total IPC	154	147	159
10.	Excise Act	8	22	29
11.	Gambling Act	7	24	8
12.	Opium	2	5	—
13.	Other Acts	17	15	7
14.	Total Acts	34	66	44
15.	Grant Total	188	213	203

Alipur Police Station covers large rural areas.

POLICE STATION, DELHI CANTT.

S.No.	Crime Head	1964	1965	1966
1.	Murder	2	1	2
2.	Attempt to Murder	2	2	2
3.	Riots	3	—	1
4.	Robbery	—	1	3
5.	Day Burglary	20	12	19
6.	Cycle Theft	45	47	42
7.	Night Burglary	25	16	19
8.	M.V. Thefts	1	7	7
9.	Pick Pocketting	5	5	15
10.	Servants Theft	6	5	15
11.	Misc. Thefts	121	110	110
12.	Kidnapping and Abduction	7	8	3
13.	Stabbing	1	—	—
14.	Arms Act	1	1	2
15.	Misc. I pc	66	87	89
16.	Total I pc	304	301	322
17.	Excise Act	15	20	43
18.	Opium Act	5	5	3
19.	Gambling Act	21	15	30
20.	Other Acts	4	3	12
21.	Other Crimes	350	345	412
22.	Grand Total			

Delhi Cantt. Police station comprises entire urban area of Delhi Cantt., I.A.F. Station at Palam including the Palam Airport and about twenty fairly important

villages. Many of the villagers have sold their land and new colonies are rapidly growing in these areas.

POLICE STATION, MEHRAULI

S.No.	Crime Head	1964	1965	1966
1.	Murder	2	2	3
2.	Attempt to murder	—	3	1
3.	Riots	2	1	4
4.	Robbery	5	—	—
5.	Day Burglary	1	10	2
6.	Night Burglary	33	20	8
7.	Cycle Thefts	6	5	3
8.	Pick Pocketting	11	2	4
9.	Servant Thefts	1	3	1
10.	Misc/Other Thefts	55	47	34
11.	Kidnapping	3	3	6
12.	Cheating	4	3	6
13.	Misc. I pc	62	53	51
14.	Total I pc	185	152	124
15.	Excise Act	16	9	16
16.	Opium Act	1	—	—
17.	Gambling Act	2	—	2
18.	Arms Act	2	—	—
19.	Locol and Spl Law	21	9	18

Mehrauli Police Station has an area of 58 sq. miles and may be said to be a rural police station. In its south and south west it is surrounded by Gurgaon District of Haryana.

POLICE STATION: NAJAFGARH

S. No.	Crime Head	1964	1965	1966
1.	Murder	3	1	1
2.	Attempt to Murder	1	2	2
3.	Riots	—	—	—
4.	Robbery	2	—	—
5.	Day Burglary	6	8	10
6.	Night Burglary	29	24	9
7.	Cycle Theft	2	3	3
8.	Pick Pocketing	—	1	3
9.	Servant Theft	—	1	—
10.	Other Theft	34	34	29
11.	Cheating	4	3	2
12.	Stabbing	4	—	—
13.	Misc. I pc	66	72	63
14.	Total I pc			
15.	Excise Act	7	18	27
16.	Opium Act	—	3	—
17.	M.V. Theft	1	—	—
18.	Other Act	24	4	3
19.	Total Crime	179	174	152

Najafgarh Police Station has an area of 101 sq. miles which include 61 villages. *There is a good deal of electricity theft because of the electrification.* The two important centres of population are Najafgarh and Bijwasan. It is an entiiely rural police station.

POLICE STATION : NANGLOI

S.No.	Crime Head	1964	1965	1966
1.	Murder	1	1	4
2.	Attempt to Murder	—	—	1
3.	Riots	1	—	1
4.	Robbery	1	2	1
5.	Day Burglary	6	5	4
6.	Night Burglary	30	16	10
7.	Cycle Theft	5	—	3
8.	Pick Pocketting	1	1	—
9.	Servant Theft	—	—	1
10.	Misc. Theft	27	20	33
11.	Kidnapping and Abduction	4	—	—
12.	Dacoity	—	—	—
13.	Misc. I pc	11	6	9
14.	Total I pc	121	104	120
15.	Excise Act	7	18	7
16	Opium Act	1	2	—
17.	Gambling Act	1	2	—
18.	Other Act	23	2	1
19.	Copper-wire Theft	9	26	22
20.	Crime (Total)			
21.	Arms Act.	1	1	1
		154	129	128

Nangloi police station has an area of 75 sq. miles consisting 40 villages. The most important village is Nangloi itself which holds four cattle-fairs every year. There is a great deal of theft of telegraph wire and much smuggling of liquor and grains across the frontier from Haryana.

POLICE STATION, NARELA

S. No.	Crime Head	1964	1965	1966
1.	Murder	1	1	1
2.	Attempt to Murder	—	1	—
3.	Riots	3	3	4
4.	Robbery	1	—	—
5.	Day Burglary	9	4	15
6.	Night Burglary	17	11	16
7.	Cycle Theft	7	1	8
8.	Pick Pocketting	1	—	2
9.	Servant Theft	1	1	2
10.	Misc. Theft	29	25	18
11.	Kidnapping	1	2	—
12.	Stabbing	—	1	—
13.	Misc. IPC	47	41	49
14.	Total IPC	117	91	115
15.	Excise Act	3	17	1
16.	Opium Act	—	—	—
17.	Gambling Act	—	—	—
18.	Advise Act	17	1	4
19.	Total Acts	20	18	4
20.	Grant Total	137	109	120

Narela Police Station has an area of 45.50 sq. miles. It includes 29 villages and two townships of Narela and Bawana. Narela is considered to be the greatest grain *mandi* in Delhi area. Bawana is a road junction and all the important roads going north of Delhi pass through this village. This is the centre of an important cattle fair in the month of March.

Crime in Rural Delhi

The incidence of cognizable crimes under the Indian Penal Code and offences under various local and special laws in the Union Territory of Delhi has shown a fluctuating trend in the past, particularly during the period 1972-78. This is evident from the following table:

Year	Total cognizable IPC Crime in rural areas of Delhi	Total number of cases under special and local laws in rural areas of Delhi.
1972	2,535	630
1973	1,452	324
1974	1,517	324
1975	1,375	435
1976	1,641	285
1977	2,001	322
1978	2,208	N.A.

Murder

A total number of 133 cases were registered under the crime head 'Murder' in the year 1972 for the Union territory of Delhi. Of these 19 murders were committed in the rural areas of Delhi. As against this 184 cases of murder were recorded in Delhi in 1977. Of these 34 cases were reported from rural areas.

Culpable Homicide not amounting to murder

A total of 139 cases were recorded under this head in the year 1973. Of these 12 cases were registered from the rural areas. There was a considerable increase in the registration of such cases, in rural Delhi in 1977 when 25 cases were registered. The position further, worsened in 1978 when 44 cases were registered. This shows 3.6% increase in crime rate in the rural areas.

Rape

The incidence of rape cases in rural Delhi was much less as compared to urban Delhi. The following table explains the position:–

Year	Total number of rape cases reported from Delhi	Total number of rape cases reported from rural areas
1972	33	3
1973	46	5
1974	64	3
1975	55	5
1976	59	7
1977	71	8

The analysis of the rape cases in Delhi is revealing. While the victims in rural areas were in the age group of 16–30 years, in the urban areas, the victims were mostly under 16 years. The following table is revealing on this point:

Year	Total number of rape cases reported in urban Delhi	Total No. of rape cases reported in rural Delhi	Victims of rape by age Group: Below 16 yers		16–30 years		Above 30 yrs.	
			In urban Delhi	In rural Delhi	In urban Delhi	In rural Delhi	In rural Delhi	In urban Delhi
1972	30	3	17	1	10	2	3	—
1973	41	5	18	4	29	—	4	1
1974	61	3	29	1	25	2	7	—
1975	50	5	24	1	21	4	5	—
1976	52	7	30	—	21	4	1	3
1977	63	8	15	—	35	4	13	4

Kidnapping and Abduction

In 1972 the number of crimes recorded under this head was 528. Of these only 56 were registered from rural areas. The number increased to 610 to 1977, thus showing 11.5 cases per one lakh of population. In 1977 only 45 cases of kidnapping and abduction were reported from the rural areas which means only 0.1 cases per one lakh of population. The number of cases further increased in 1978 when 858 cases were registered. Of these only 53 cases were registered from rural areas.

Dacoity

Eleven cases of dacoity were registered from the rural areas in 1972 and 2 cases in 1977. 6 cases of dacoity were registered in 1977 and 18 cases in 1978.

Robbery

Rural Delhi was never free from the cases of robbery. The figures of the crime, however, fluctuated year by year, but on the whole the crime rate remained lower than urban Delhi.

Riots

In Delhi 148 cases of riots were registered in 1977. Of these only 29 cases were reported from the rural Delhi. There were 304 riots in the year 1978 and 294 in the year 1979. Corresponding figures for rural Delhi are not available.

Burglary

522 burglary cases were registered in rural Delhi in 1972.

Thefts

The incidence of crime under the head 'Thefts' has been perhaps the highest of all the IPC crimes in rural Delhi. In 1972, 908 cases of theft were reported. In 1978, the number of cases went up to 1,169.

Criminal Breach of Trust

In 1972, the total number of cases reported under this head were 658. Of these only 27 cases were reported from the rural areas. The position seems to have improved during the years 1973 to 1976 as shown in the table below:

		1973	1974	1975	1976
1.	Total No. of cases from entire Delhi	555	522	336	418
2.	Volume per one lakh population in entire Delhi	12.29	11.1	6.6	9.3
3.	No. of cases from rural areas of Delhi	20	18	8	80
4.	Volume per one lakh population in rural areas	Negligible	Negligible	Negligible	2.3

In 1977 the number fell to 12 cases but in 1978, 71 cases were reported from rural areas.

Cheating

36 cases of cheating were reported from the rural areas in 1972. The position, however, improved subsequently and the number of cases reported were 13, 16, 18 and 27 in 1973, 1974, 1975 and 1976 respectively. In 1977, the number of cheating cases increased to 41. The position, worsened further in the year 1978 when 52 cases of cheating were reported.

Counterfeiting

In 1972–73 no cases of counterfeiting were reported in the rural areas of Delhi. But between the years 1974–77, there was one such case every year.

Total Cognizable IPC Crime

The analysis of the cases reported under IPC heads shows that in rural areas there were 2,535 cases in 1,974, 1,375 in 1975 and 1,641 in 1976. The situation deteriorated in 1977 and 1978 when 2,001 and 2,208 cases were reported respectively.

Offences under local and special laws

In the year 1972, 630 offences were reported from the rural areas. The number of such offences kept on fluctuating in the subsequent years.

Arms Act

The number of offences under the Arms Act during the year 1972 was 888. Of these 28 cases were reported from the rural Delhi. The number of cases reported was 1,079 in 1973 1.309 in 1974, 1749 in 1975 and 1874 in 1976.

Gambling Act

74 such cases were reported from the rural Delhi in 1972.

Excise Act

2762 such cases were recorded in Delhi in 1972. Of these 446 cases were reported in rural areas.

Opium Act

300 such offences were reported in 1972 of which only 22 offences were from the rural areas. 14 such offences were reported in 1973, 7 in 1974, 11 in 1975, 18 in 1976 and 11 in 1977.

Thefts

During 1972, 18.33 lakhs worth of property was stolen from rural areas of Delhi. In the year 1973, it amounted to Rs. 11.05 lakhs. In 1976 property worth 46.19 lakhs was reported stolen. In 1977, property valued at Rs. 34.43 lakhs was stolen.

The Delhi Police was gradually strengthened to make it more efficient in rural as well as urban areas. The number of personnel of all ranks in the Delhi Police was 20,927 in 1976, 21499 in 1977 and 22,468 in 1978-79. It increased to 23,248 on 31st March, 1980. As on Ist Sept-1980 it stood at 24,387. There was thus an increase of 16.53% in police strength in September, 1980 as compared to 1976.

The nature of crimes in the rural and urban areas of Delhi is almost the same. The number of crimes is, however, comparatively small in rural areas. Crimes such as theft of cattle and crops are exclusive to rural areas. Simple crimes are generally dealt with on the Thana or Police Station level but serious crimes are referred to concerned Police District for thorough scrutiny and investigation.

The Delhi Police is a big organisation. It consists of the following branches and units for different functions. Besides the Police Head Quarters and District Police Force, it comprises the following departments:

1. Criminal investigation Department consisting of Special Branch, Crime Branch and Crime Investigating Squads, Photo Sections, Crime Record Office etc.
2. Security Branch
3. Lives or General Duty Lines Unit
4. Demolition Squad
5. Mounted Police
6. Women Police
7. Police Training School
8. Communication and Transport
9. Traffic Branch
10. Delhi Armed Police
11. Foreigners Regional Officer (FRO)

Besides Police, there is a big Home Guards establishment with an authorised strength of 9350. But there is no rural wing of Home Guards organisation in the Union Territory of Delhi.

Administration of Justice

For the purpose of Administration of Justice, Delhi was originally placed under the control of the former Chief Court of the Punjab. All proceedings of the Civil and Criminal Courts in Delhi were regulated by the Court of Civil Procedure and Court of Criminal Procedure then in force in Punjab. A Small Cause Court had also been established in the then Delhi District for adjudicating upon small cause cases valued between Rs. 500 and 1,000. The Head of the Civil Judiciary was District Judge, who was assisted by an Additional District Judge, a Sub-Judge and the Judge of the Small Cause Court and also a Registrar. There were subordinate courts presided over by Munsifs

who were generally revenue officers having powers of Magistrates of the Second or Third Class depending upon the circumstances. Despite the fact that separate province of Delhi was created with effect from Ist December, 1912, it continued to be controlled by the Punjab Court Act so far as the administration of Justice was concerned. Subsequently, the posts of Additional District Magistrate and City Magistrate were sanctioned in order to assist the Deputy Commissioner of Delhi in his judicial work including criminal and revenue appeals. At present, the following classes of Courts are functioning in the Union Territory of Delhi:-

(1) Civil Court

(2) Criminal Court

(3) Rent Controllers under the Delhi Rent Control Act.

(1) Civil Courts

The Civil Courts in Delhi are under the jurisdictional control of a District Judge. Subordinate to this Court are the Courts of Additional District Judges, Subordinate Judges and all Small Causes Court. The Judges of the Courts of Small Causes possess powers to try civil suits not exceeding Rs. 1,000 in value. The Senior Subordinate Judges exercise the power of appeal in suits of the value not exceeding Rs. 1,000 and also inland suits of the value not exceeding Rs. 250 apart from unclassed suits of the value not exceeding Rs. 500. The Additional District Judges have been given the original jurisdiction to try the gambling cases and references under the Land Acquisition Act. Appeals against the judgements, decrees and orders upto Rs. 10,000 go to the District Judge/Additional District Judge.

(2) Criminal Courts

There are two classes of Criminal Courts in Delhi in accordance with the provisions contained in the Union Territory's (Separation of Judicial and Executive Functions) Act, 1969: (a) the Courts of Sessions (b) the Courts of Magistrates. The Courts of Magistrates consist of Chief Judicial Magistrate and the Executive Magistrates. The Judicial Magistrates are headed by a Chief Judicial Magistrate and assisted by the Judicial Magistrates of the First and Second Class under the over all control of the Delhi High Court The Chief Judicial Magistrate has been vested with powers under the Criminal Procedure Code which were hitherto exercised by the District Magistrate, Delhi. The second category of Magistrates, namely the Executive Magistrates are headed by a District Magistrate, who is assisted by Sub-Divisional Magistrate, and Executive of the First and Second Class and also the Special Executive Magistrate.

The main functions of the Judicial Magistrate as defined under Section 5 of the Criminal Procedure Code read with the Union Territories (Separation of Judicial and Executive functions) Act, 1969, are to deal with the matters involving the appre-

ciation or shifting of evidence or the formulation of any position which express any person to any punishment or penalty or detention in custody pending investigation, enquiry or trial or would have the effect of sending him for trial before any court. The Judicial Magistrate should also be competent to try all those cases of crime under the Indian Penal Code and offences under the Special and local Laws, including petty offences committed within the jurisdiction of the Union Territory of Delhi. The functions of the Executive Magistrates are administrative or executive in nature such as the grant of licence, the suspension or cancellation of licence, sanctioning a prosecution or withdrawing from a prosecution and all others matters concerning law and order and also relating to the preventive measures in accordance with the provisions of Sections 107,109, 110,133,144 and 145 of the Code of Criminal Procedure. All other offences are triable by the Judicial Magistrates and appeals or revision petitions against their decisions and orders are made to the Court of Session or to the Delhi High Court, as the case may be. There are a total of 51 Magisterial Courts, now available for the administration of criminal justice in the Union Territory of Delhi.

(3) The Rent Controllers

In addition to the Civil Courts and the Courts of Criminal Justice, there are controllers appointed under the Delhi Rent Control Act for the purpose of deciding disputes between the landlords and tenants within the jurisdiction of the Union Territory of Delhi. The appeals against their orders go to the Rent Control Tribunal, Delhi as provided under the Delhi Rent Control Act.

All Judicial Officers appointed as District and Session Judges and Additional District and Session Judges and Rent Control Tribunal belong to the Delhi Higher Judicial Service. The officers presiding over other courts belong to the Delhi Judicial Service. However, the officers belonging to the Delhi Judicial Service are promoted for appointment as District and Session Judge and Additional District and Session Judge and Rent Control Tribunal. It has also been provided in the Delhi High Court Act, 1966 that not more than 1/3rd of the officers to the Delhi Judicial Service can be appointed from the Bar by the Lieutenant Governor of Delhi through selection on the basis of the recommendations of the Chief Justice of the Delhi High Court.

The system of investigation and prosecution under the provision of the Code of Criminal Procedure involved delay in the disposal of cases due to cumbersome legal procedure. Moreover the whole procedure is so complicated that a common man can hardly grasp it.- Justice Bhagwati Committee rightly Commented:

'........They (rural people) have distrust and suspicion of the law, the law courts and the lawyers for several reasons. One is ignorance and illiteracy on their part which prevents them from taking advantage of the legal process. Another is their helplessness and lack of assertiveness which arises by reasons of social disabilities and

economic dependence and that also places the legal process effectively beyond their reach.'

In order to make better provision for a cheaper and speedy disposal of petty cases as also to share the load of work of the civil and criminal courts, Panchayat Adalats were introduced through Delhi Panchayati Raj Act which came into force on 12th May, 1956. Petty offences of theft where value of property does not exceed Rs. 50 and other petty offences under the Indian Penal Code, Delhi Gambling Act and under any other enactments punishable with fine only upto a limit of Rs. 100 are triable by the Panchayat Adalats. No Panchayat Adalat shall inflict a substantive sentence or imprisonment, nor impose a fine exceeding Rs. 100 and no imprisonment even in default of payment. Further no Panchayat Adalt shall try any criminal case against a public servant or against a previous convict or secure a bond for good behaviour under Section 109/110 Cr.P.C. In any criminal case before the Panchayat Adalat, if an accused is acquitted or discharged and the Panchayat Adalat comes to a decision that accusation against him was false or frivolous, then it may, after a show cause notice to the complainant direct him to pay compensation not exceeding Rs. 25 to the accused. A Panchayat Adalat can also punish any person who intentionally offers any insult to a Panchayat Adalat or any member there of while the Panchayat Adalat is sitting in any stage of judicial proceedings; and it may at any time before rising on the same day take congnizance of the offence and sentence the offender to a fine not exceeding Rs. 5. But no conviction by Panchayat Adalats shall be deemed to be a previous conviction for the purpose of Section 75 of the I.P.C. or Section 3 of the Prohibition of Offenders Act. Not only criminal cases but petty civil and revenue cases are also triable by the Panchayat Adalat of the Circle concerned.

Thus some load of case work is shared by the Panchayat Adalat in the administration of Justice to the poor and needy which otherwise would have further burdened the regular courts to the much inconvenience and expense of the rural people.

CHAPTER XV

MEDICAL AND PUBLIC HEALTH SERVICES

Delhi as we know it today came into being in 1912 to serve as the seat of government. It was reconstituted into a province comprising Delhi *tehsil* and a portion of Ballabhgarh *tehsil*. In 1915 some trans-Yamuna areas were transferred from Ghaziabad *tehsil* of Uttar Pradesh. This completed the jurisdiction of the present day Delhi.

There were times when the population of urban and rural Delhi was evenly matched. But since 1911 a definite downward trend in the rural population set in which continues even today. In 1981 the rural population was only 7.3 per cent of the total population of Delhi.

State of Health

The birth and death records truely reflect the state of health of a people. For Delhi as a whole, some information is available on this point in the sanitary report pertaining to 1877-1881 (see p. 369).

After 1912 the vital statistics of Delhi were registered separately. For this purpose, Delhi was divided into three circles, viz. Delhi Municipal area, Delhi Notified area and Delhi Rural area. In rural area, the head of the household or the *chowkidar* of the villages got the births and deaths duly recorded. Before 1956, the registration of births and deaths was done by Delhi Administration. Thereafter the Delhi Municipal Committee did it with the help of Sanitary Inspector/Vaccinator in urban areas and *chowkidar* in rural areas.

From January, 1971, the registration of births and deaths is done under the provisions of the Registration of Birth and Deaths Act, 1969 and the rules made under it. Under the Act, it is the duty of the head of the household to register a birth (live birth or still birth) within 7 days of occurrence at the nearest registration centre. Similarly deaths are to be registrered within 3 days from the date of occurrence. For births and deaths in hospitals and similar institutions, the head of institution is responsible to get the event registered within the prescribed time.

Any person violating the provisions of the Act is punishable with a fine upto Rs. 50. The responsibility of enforcing the registration of births and deaths in the

Year	Total birth registered			Total death registered			Total death from		
	Person	Male	Female	Person	Male	Female	Cholera	Small pox	Fever
1877	—	—	—	16.062	8,707	7,345	—	768	8,365
1878	—	—	—	33,740	17,866	15,874	44	845	22,729
1879	—	—	—	43,984	23,121,	20,363	416	12	35,335
1880	19,134	10,341	8,793	20,548	11,445	9,103	2	1	15,577
1881	29,546	15,842	13,704	23,022	12,452	10,570	167	72	15,734

Union Territory of Delhi, has now been entrusted to Delhi Administration for implementation.

The Director of Health Services, Delhi functions as the Chief Registrar for the purpose. In rural areas, the Zonal Health Officer (Rural) of Delhi Municipal Corporation functions as Registrar and Block Development Officers as Additional Registrar. The actual registration is done by the Panchayat Secretaries. At the end of March, 1971 the number of registration centres under the jurisdiction of Delhi Municipal Corporation was 67.

The Director, Bureau of Economics & Statistics, Delhi Administration who is also Additional Chief Registrar, coordinates the work of registration. The Bureau also functions as the office of the Chief Registrar of births and deaths.

Infant and Maternal Mortality

In the early decades of 20th century, infant mortality was very high in Delhi. Immature birth, bronchitis, diarrhoea, dysentary, fever, convulsions, sepsis and respiratory diseases claimed many lives. However, during the last two decades, the infant mortality rate has come down considerably. Introduction of modern system of midwifery and the rapid implementation of maternity and child welfare services under the plan programmes have contributed to this. The following table gives the infant mortality rate in Delhi from 1921 to 1982 :-

Year	No. of infant deaths	Infant mortality rate per thousand
1921	4,409	217.2
1931	4,982	185.7
1941	6,101	162.0
1951	4,926	84.7
1961	5,569	70.8
1971	6,312	62.7
1981	8,805	52.1
1982	8,511	47.6

The main causes for maternal mortality were anaemia, haemorrhage, eclampsia and difficult labour. The rate of maternal mortality which was considerably high in the earlier decades has come down now due to increased pre-natal and post-natal facilities in hospitals, maternity homes, and health centres. The maternal mortality rate in Delhi area is shown in the following table :

Year	Maternal mortality rate per thousand
1941	5.00
1951	2.00
1971	0.53
1975	0.33
1981	0.50
1982	0.53

Health Standard in the Past

In the first half of 19th century, it was observed that the health standard in the villages irrigated by Western Yamuna Canal was considerably poor in comparison to other villages of Delhi. This attracted the attention of Government and in 1847 a Committee was appointed to enquire into the matter. Medical Officer, Dr. Dempster, who looked into the matter found that 50% of the population of the villages surveyed by him was suffering from the disease of the spleen (a result of chronic malaria infection). In some villages the incidence of the disease was as high as 75%. Another inquiry was instituted by the Government in 1867 and the results confirmed the earlier findings. It related the disease with swampiness and inadequate drainage. The villages enjoying the greatest advantage of irrigation were invariably the ones, where the debilitating disease was most rampant.

Efforts were made to reduce malaria in these areas by reducing swampiness by re-alignment of the Western Yamuna Canal and by avoiding swamp cultivation. The quinine was widely distributed by Government officers among the rural population.

Another killer disease mentioned in the report was plague. In the villages, the plague officials were deputed to disinfect the houses for controlling plague. However, the rural population did not accept the programme easily. Small pox was widespread in rural as well as urban areas. Special vaccination staff consisting of one Vaccinator Superintendent and ten Vaccinators was engaged in the rural areas for the purpose. Cholera, diarrhoea, dysentry, typhoid and tuberculosis were other common diseases. The exact data on these diseases are not, however, available. Infectious disease of the skin called as 'Delhi Boil' was also common.

The number of deaths caused by Cholera, Fever, Small Pox and Plague from 1885 to 1902 are given in the table below :

Year	Actual deaths from			
	Cholera	Fever	Small Pox	Plague
1885-90 (Average)	241	20,948	139	—
1891-95	470	15,244	176	—
1896	20	13,788	1045	—
1897	—	12,438	88	—
1898	—	12,161	105	—
1899	12	12,692	95	—
1900	383	21,680	333	—
1901	9	19,300	12	—
1902	4	21,660	13	2

(Sanitary Administrative Report of 1904)

The discovery of antibiotics and implementation of various health programmes since 1951 has helped in controlling many diseases in rural Delhi. The Malaria was almost eradicated by the implementation of National Malaria Programme from 1953 to 1958 and National Malaria Eradication Programme from 1958 to 1967. There has been some setback in the programme since 1968 and malaria has reappeared though in a less virulent form.

Indian Medical System before Independence

The *Ayurveda* and *Siddha* medical systems are truely Indian in origin and development. The *Ayurveda* system was widely prevalent in northern part of India, at least from the beginning of the Christian era. Muslims, introduced the *Unani* system of medicine. The system prospered during the Muslim rule, but it was more or less confined to the cities. The indigenous Ayurvedic system was more popular in rural areas. With the advent of the British, the allopathic system of medicine started in India. Homoeopathy, though not of Indian origin, also spread in rural areas.

Though Allopathic and Homeopathic system of medicines have progressed substantially, the *Vaids* and *Hakims* still play an important role in the medical care of rural population.

Not much is known about the medical facilities in rural areas of Delhi in the 19th century. However, three dispensaries were established at Alipur, Mehrauli and Najafgarh in rural Delhi around 1877. Till 1911, these three dispensaries functioned without any bed and served only as medical care centres. Taking India as a whole during the British period, the doctor-population ratio was 1:6400. For the rural Delhi it must have been much more.

The medical care in rural Delhi was mainly the concern of medical practitioners of various systems. Some preventive and public health services were provided separately for controlling epidemics, but these did not function smoothly in the absense of adequate staff and definite programme or objective. Services for health care including immunisation and nutrition did not exist. Environmental sanitation was nobody's concern. The curative and preventive medicines, however, developed side by side for many years with emphasis on curing the sick. To combine these two as one unit and to provide integrated health care, in 1931 the European Conference in Rural Hygiene convened by the Health Organisation at the League of Nations, recommended the provision of Rural Health Services through Rural Health Centres.

As a result of these recommendations, seven model health units were established in different parts of the country between 1931 and 1939 with the Rockfeller Foundation's Assistance. The Rural Health Unit at Najafgarh was established on Ist April, 1937 to serve the following:

(i) to inaugurate sound rural health programme in selected parts of Delhi Province;

(ii) to demonstrate modern methods of practical approach to rural health problems which might be applied elsewhere;

(iii) to serve as a training centre for all types of public health personnel in the Delhi Province; and

(iv) to serve as a model organisation for others.

The Najafgarh Health Unit laid emphasis on the control of communicable diseases, environmental sanitation, maternity and child care, collection of vital statistics and training. It also conducted the inspection of dairies, eating places, water sources and also monitored maternal and child health clinics. Other clinics were held at the headquarters at Najafgarh and at villages Dhansa, Palam and Chhawla. Later in the year, special anti-natal clinics and well-baby clinics were started at these centres. The Health Unit also served as a demonstration and training

centre for trainees from a number of institutions. A travelling dispensary also took care of some eight villages. Those villages not covered by the Najafgarh Health Unit were taken care of by the Director of Health Services, Delhi Province.

When the Rockfeller Foundation stopped contributions in 1942, the Government took over the management of the Unit. In the mean time, the Bhore Committee was appointed in October, 1943 to make a survey of the existing health conditions and health organisations and to make suggestions for future development. The Committee submitted its report in 1946 recommending a short and a long term programme for establishing Primary Health Centres in rural area.

Medical Facilities since 1947

After the country got independence in 1947, health care to the rural population was adopted as a part of the Community Development Programme as made out in the Bhore Committee Report. It was planned to provide health cover to the whole country through a net work of Primary Health Centres, one in each block. The foundation of a Primary Health Centre at Najafgarh was laid by Rajkumari Amrit Kaur, the then Health Minister on 6th April, 1949. This Primary Health Centre, first of its kind in the country, started functioning in 1951.

In India, the Community Development Programme was launched on October, 2, 1952 for an overall development of rural areas. Integrated medical and preventive care facilities formed a part of this programme. This was an important milestone in the development of rural health services in Delhi Under this programme, 8 Primary Health Centres were opened in rural Delhi between 1952 and 1962.

Name of the Primary Health Centre	Year of establishment
1. Najafgarh	1952
2. Palam	1957
3. Ujwa	1955
4. Kanjhawala	1954
5 Alipur	1958
6. Narela	1960
7. Mehrauli	1960
8. Fatehpur Beri	1962

These Primary Health Centres were started as a part of the Community Development Programme to provide adequate health care to the rural population. Most of these centres were located at the Block Headquarter and each of them covered nearly 100 villages with 80,000 population. The main services provided in these centres included a medical relief, maternity & child care, family welfare, environmental sanitation, control of communicable diseases, school health, collection of vital statistics and health education to rural population.

An important step in the direction of primary health care was the establishment of an Orientation Training Centre at Najafgarh in 1954 to impart training in public health to health workers from the Community Development Project areas of eleven north Indian states. This training centre was organised under the Ford Foundation Programme. Emphasis was laid on identifying local health problems, studying local social and cultural patterns in relation to health need and developing knowledge, attitude and skills helpful to rural areas.

One Research-cum-Action Project was organised with the assistance of Ford Foundation at Najafgarh in September, 1956. It dealt with the problem of environmental sanitation with special reference to designing, installation and promotion of the use of latrines in rural areas.

On 1st December, 1957, the Central Government (Directorate General of Health Services) took over Najafgarh, Palam and Ujwa Primary Health Centres which carried out the three-fold functions of research, training and serving. The remaining five centres viz. Kanjhawala, Alipur, Narela, Fatehpuri Beri and Mehrauli were taken over by the Delhi Municipal Corporation. Subsequently, five sub-centres and 11 *dai* centres were attached to the following three Primary Health Centres:

Primary Health Centre	Sub-Centre	*Dai* Centres
1. Najafgarh	Mitraon and Chhawla	Jaffarpur, Kair, Jharoda Dechaun and Pindwala Kalan
2. Palam	Kapashera Mahipalpur	Bijwasan, Shahabad, Mohmadpur and Nangal Devat
3. Ujwa	Dhansa	Raota and Mundela Kalan.

These were in addition to the Practice Field Centre at Chhawla, a District Board Dispensary at Bijwasan and a mobile dispensary with headquarters at Chhawla.

The College of Nursing chose village Chhawla as the Practice Field Centre for their trainees. It appointed a Supervisor and three Public Health Nurses at Chhawla, who worked in coordination with the Primary Health Centre, Najafgarh. The objective was to provide better nursing service to the villagers and practical field training to the students.

A project on school health was started at the Rural Health Training Centre, Najafgarh in 1965. This was later amalgamated with the Centre in 1973 and now functions as its School Health Section. It looks after the health of school children numbering about 36,000 and advises school authorities on hygiene, sanitation and other health matters.

Present State of Rural Health Services

An integrated and comprehensive health care programme is being implemented in rural areas by the Municipal Corporation, the Delhi Administration and to a lesser extent Directorate General of Health Services. The rural community is served by various institutions like Primary Health Centres, Dispensaries, Maternity and Child Health Centres and Hospitals.

Hospitals

An Ayurvedic Hospital with 40 beds is functioning under the control of Municipal Corporation, Delhi at Haidarpur.

Primary Health Centres and Sub-Centres

There are 8 Primary Health Centres, five sub-centres and many *dai* centres in rural Delhi. One Primary Health Centre with its sub-centres provides health care to a Block with more than sixty thousand population.

Dispensaries

Integrated medical care is provided by 62 rural dispensaries. All the four systems of medicine, Allopathic Ayurvedic, Unani and Homoeopathic are in vogue in rural Delhi. Each dispensary serves 8,000 people on an average.

Beds

The number of beds available to the rural population for medical care amount to 141. This means 0.277 beds per 1000 population. Of the 141 beds, 79 are located in 8 Primary Health Centres, 40 in the Haiderpur Ayurvedic Hospital and 12 in TB Hospitals.

Maternity and Child Health Centres and Sub-Centres

49 Maternity and Child Health Centres and Sub-centres are spread over in 258 villages of Delhi. Trained staff including a Lady Health Visitor, Midwife and trained *dais* serve these centres. They provide clinic services and domiciliary services to mothers and toddlers. Each Centre serves a population of 10,000. This shows that rural Delhi is better served with integrated preventive, promotive and curative health facilities. At the national level on an average one PHC serves a rural population of 88,440 (1974) whereas in Delhi one PHC serves a population of 68,543 (1st April, 1977).

62 dispensaries and 49 Maternity and Child Health Centres and Sub-centres serve the rural population of Delhi. One dispensary serves on an average 8000 population and one MCH Centre or Sub-centre 10,000 population. These figures are certainly encouraging.

The provision of hospital beds in rural Delhi is inadequate. For Delhi as a whole the bed population ratio was 2.3: 1000 (1981) but the same for rural Delhi was 0.129 : 1000 (1976). This is much lower than the national average of 0.68 : 1000 in 1981. To remove this disparity, seven hospitals with 100 beds each have been proposed in Seventh Plan and these have been approved by the Planning Commission in principle. Of these, three hospitals to be established at Mangolpuri, Khichripur and Jaffarpur have already been cleared by the Central Government. The other four to be built at Jahangirpuri, Maidan Garhi, Pooth Khurd and Siraspur village will come up subsequently.

National Health Programmes

With a view to improving the health of the people, some programmes were launched at the national level. Rural Delhi also benefitted from these programmes. In this connection, the following deserve special mention:

(i) **National Small-Pox Eradication Programmes**

The small-pox eradication programme in rural Delhi is an integral part of the National Small Pox Eradication Programme. It has been entrusted to the Municipal Corporation of Delhi. Prior to 1962 , the Municipal Committee and the Notified Area Committees were responsible for this programme in their respective areas. But in 1962, a united small-pox eradication scheme was launched in Delhi to cover the whole Corporation area, including the rural zone. The main emphasis was put on vaccination. Whenever there was a case of smallpox, it was referred to Infectious Diseases Hospital and containment measures taken. These measures were intensified in 1973. In 1975-76, an intensive house to house search was conducted in vulnerable urban and rural areas. A special search was conducted in rural areas in the month of November, 1976.

(ii) **National T.B. Control Programme**

Till 1962, the T.B. patients from the rural area had to come to the city for treatment. In 1962-63, a National T.B. Control Programme was started under a unified control in the whole Union Territory of Delhi covering rural as well as urban areas. It comprised.

(i) organised case finding programme;
(ii) organised treatment of T.B. patients thus detected;
(iii) organised preventive measures against the disease;
(iv) and rehabilitation of the patients after treatment.

A sample survey conducted in 1955-58 revealed that 18 persons per one thousand in Delhi suffered from T B. Of these, 25 per cent were sputum positive cases. It was estimated that out of 3 lakh people inhabiting rural Delhi, about 4,500 suffered from T.B. By 1981, this number of patients had increased to 7500. Thus

to serve the rural areas of Delhi, two clinics were opened in 1964-65 at Moti Nagar and Narela. Another T.B. Clinic was opened at Nehru Nagar in 1971 to serve the increasing population of South Delhi. Prior to this, Delhi had TB clinics at Shahdara and Mehrauli. A new T.B. Clinic has been started in Gulabi Bagh and another is under way at Patparganj to serve the trans-Yamuna areas.

On date, out of 13 TB clinics or hospitals in the Union Territory, five peripheral TB clinics are serving the rural areas. The TB clinic at Moti Nagar has been upgraded to the level of District TB clinic. It serves the rural areas of west zone viz. Najafgarh, Chhawla, Daulatpur, Kanjhawala, Ujwa and Palam. It has now 11 sub-centres out of which 4 are microscopic-cum-treatment centres and 7 treatment centres. The TB clinics at Nehru Nagar and Shahdara, have also opened 3 sub-centres to distribute anti-TB-drugs to rural population. The sub-centre in Bakhtawarpur village, besides serving the rural areas, imparts rural training to the students of medical colleges.

B.C.G. vaccination is the best remedy against tuberculosis. Delhi has one BCG team comprising 7 technicians for this purpose. Another team has also been sanctioned recently. Each team has been sub-divided into sub-teams and attached to various TB centres.

(iii) **Malaria Control Programme**

Malaria control in Delhi started as early as 1936 when the Government entrusted the work to the Malaria Institute of India. Satisfied by its progress, it was decided in 1946, to extend its operation to the rural areas of Delhi as well. Till the discovery of chemical insecticides like D.D.T. & B.H.C. in mid forties, anti-malarial activities depended on biological methods for controlling mosquitos breeding. Larval insecticide, both chemical and oils, and pyretherum were used for killing mosquitos. With the growing use of these insecticides, malaria in the rural areas of Delhi is now under effective control. Anti-malaria operations in Delhi led to a country wide campaign under the National Malaria Control Programme in 1953. As a result of this more than eighty per cent reduction was noticed in the incidence of malaria between 1933 and 1954.

Figures of malaria cases recorded in various hospitals and dispensaries of Delhi from 1945 to 1957 are given below:

Year	Urban Area	Rural Area
1945	32,405	10,642
1946	27,868	7,167
1947	12,988	4,275
1948	12,302	4,522
1949	9,202	2,922

1	2	3
1950	6,593	2,847
1951	3,716	1,841
1952	3,434	1,967
1953	3,143	1,747
1954	2,039	1,452
1955	2,011	2,796
1956	1,566	1,496
1957	1,850	768

(iv) Malaria Eradication Programme

Encouraged by the achievements of Malaria Control Programme it was turned into Malaria Eradication Programme. It showed satisfactory progress till 1963-64, but suffered a setback in the following years due to administrative and technical reasons.

In 1966-67, the rural unit entered the maintenance phase in which extra vigilance measures were taken for early detection of malaria cases. Epidemiological investigation were also conducted to know the actual causes for the high incidence of malaria in rural Delhi. The incidence of malaria in Delhi between 1965 and 1972 is shown in the following table:

Year	No. of malaria cases	No. of blood slides collected (active, passive and mass)
1965	7	5,87,827
1966	45	4,00,625
1967	114	5,17,791
1968	37	4,46,259
1969	244	3,81,721
1970	1,056	3,72,873
1971	3,852	3,12,222
1972	3,562	3,28,708
1973	3,462	3,06,407
1974	12,163	3,07,503
1975	37,879	5,44,260
1976	49,330	7,21,157
1977	1,78,196	11,47,279
1980	56,476	12,07047
1981	53,637	12,12,152

Being in the maintenance phase of National Malaria Eradication programme, Delhi was allotted State headquarters staff and two districts (rural north and rural south) under the modified operations of NMEP of the Central Government.

Government of India recommended the creation of entomological component in anti-malaria operations with a view to serve the following purposes:

(i) Finding the susceptibility index of the mosquitos i.e. to know whether the mosquitos have developed resistance to the insecticides, if susceptible, doses of the insecticides to be applied and if resistant to insecticides, alternative insecticide that can be economically applied;

(ii) to work out the survival rate of mosquitos against insecticides and to work out wild laboratory bred mosquitoes mortality after exposure to sprayed surfaces;

(iii) to determine chemically the efficiency of the DDT applied to walls with Allessandrinis test;

(iv) to identify the malaria carrying mosquitoes in urban and rural areas by dissecting the mosquitoes;

(v) to know the feeding/resting time of malaria mosquitoes and their behavioural changes;

(vi) to suggest and advise on the application of new larvicides such as Baytex, Abate and Pyrosene.

The number of malaria cases in Delhi had gone up to 1,78,000 in 1978. No new methods of malaria control have, however, been devised. Doubts persist on the basic cause of the disease which could be either insecticidal efficacy, drug failure or mosquito behaviour. The efforts are a foot to determine the real cause leading to the spread of the disease.

(v) **Applied Nutrition Programme**

This programme aims at the application of existing knowledge in the field of food and nutrition for improving the health of the village community, specially the pregnant and nursing mothers, and children. The basic objective of the programme is to educate the community on nutrition.

This programme was started in rural Delhi in 1966 as a part of the National Programme. Initially it was started in Nangloi and Najafgarh. Subsequently, it was extended to Mehrauli, Alipur and Shahdara Blocks in 1967, 1968 and 1969 respectively. The operational stage in those Blocks completed in 1974-75. In 1974, it was extended to Bijwasan. In 1980-81, it completed its operational as well as post operational phases. During this period, 103 villages were covered under Applied Nutrition Programme. The UNICEF contributed Rs. 1,60,000 per Block during

the operational period of this programme. The programme concentrated on the following activities:

1. **Training:** To impart training to officials and non-officials at two approved institutions namely Rural Health Training Centre, Najafgarh and Lady Irwin College, New Delhi.

2. **Production Component:** To give assistance for production of protective foods depending on local conditions. This activity includes promotion of community gardens and development of poultry farms and fisheries.

3. **Nutrition Education:** Education on nutrition and allied subjects is given through demonstrations in training camps and through special courses on fruit and vegetable production. The Programme is being implemented in rural areas by lady demonstrators and *Gram Sevikas*. The material on Nutrition Education is supplied by UNICEF, which also supplies monthly magazine 'Home Science' which is directly mailed from the Directorate of Extension to all *mahila mandals* in the villages. At present, 105 *mahila mandals* are operating in Delhi villages.

(vi) **Family Welfare Programme**

Training of *dais* (traditional birth attendants) was first started at the Najafgarh Health Unit. The objective was to equip them with skills for anti-natal care and safe deliveries. In December 1949, a Maternal and Child Health team from the World Health Organisation started working in 27 villages under the Najafgarh Health Unit. The aim was to provide intensive preventive and promotive health care to expectant and nursing mothers and children. The team comprised one doctor and one public health nurse.

The Family Welfare Programme was started in India in 1951. The Government of India Launched Family Planning as an official programme in 1953. A Family Planning Research Unit was set up at Najafgarh Health Centre in January, 1959 by the Indian Council of Medical Research. Its main objectives were:

(i) To assess:

(a) acceptability of different contraceptive methods in rural areas.

(b) harmlessness of different contraceptive methods after prolonged use.

(c) reduction in population as evidenced by the reduction in the birth and pregnancy rates.

(ii) To determine the factors responsible for the attitude of rural people towards fertility control.

(iii) To evolve educational techniques to bring about a change in the prevalent attitude and behaviour in favour of fertility control.

This project was transferred to the National Institute of Family Planning in 1964.

For the first time in the country, a camp was organised for village *Pradhans* at Najafgarh in June, 1960. Over 60 persons attended the camp for a free and frank discussion on family planning. The objectives of the camp were:

(i) to acquaint the village *Pradhans* with family planning methods, techniques and practices;

(ii) to improve the scope of services in the field;

(iii) to obtain the opinion of *Pradhans* on the extension of the programme in villages; and

(iv) to formulate a plan of action for intensifying the programme in rural areas and to elicit their support.

As a part of National Programme the following Family Welfare Centres and Sub-Centres are functioning in rural Delhi, since the inception of the First Five Year Plan:

Family Welfare Centres and PHCs

1. Alipur
2. Kanjhawala
3. Narela
4. Mehrauli
5. Nangloi

Central Government

6. Najafgarh Rural Health Training Centre
7. Palam (PHC)
8. Ujwa (PHC)

Municipal Corporation of Delhi

1. Khera Kalan
2. Haiderpur
3. Ghoga
4. Holambi Kalan
5. Daryapur
6. Nizampur
7. Pooth Kalan
8. Qutabgarh
9. Chhattarpur
10. Ghitorni
11. Khanpur
12. Badarpur
13. Madanpur Khadar
14. Tughlakabad
15. Bawana
16. Shahabad
17. Bijwasan
18. Madangir
19. Mukhmelpur
20. Siraspur
21. Badli
22. Jaunti
23. Tikri Kalan
24. Libaspur

25. Burari
26. Hiranki
27. Khera Khurd
28. Pehlad Pur
29. Auchandi
30. Dheora
31. Kanjhawala
32. Rani Bagh
33. Mundka
34. Madipur J.J.
35. Madipur
36. Deoali
37. Jasola
38. Gadaipur
39. Jaunapur
40. Jhilmil
41. Ghonda
42. Usmanpur
43. Bherthal

Central Government

1. Jaffarpur
2. Kair
3. Jharoda
4. Dechaun Kalan
5. Nawada
6. Pindwala Kalan
7. Bijwasan
8. Shahbad Mohd. Pur
9. Nangal Dewat
10. Raota
11. Mundela Kalan
12. Mitraon
13. Chhawla
14. Kapashera
15. Rajokri
16. Mahipalpur

Through these Centres, the message of small family norm has spread in the rural areas of Delhi. Achievements of the Family Welfare Programme in rural Delhi since 1970–71 are shown in the table below:

S. No.	Period	I.U.D.			Sterlisation		
		Target	Achievement		Target	Achievement	
		No.	No.	%age	No.	No.	%age
1	2	3	4	5	6	7	8
1.	1970–71	1,260	716	56.8	960	376	39.2
2.	1971–72	633	387	61.1	537	491	91.4
3.	1972–73	675	272	40.3	625	674	107.8
4.	1973–74	565	415	73.4	954	467	48.9
5.	1974–75	565	364	64.4	1036	510	49.2
6.	1975–76	920	688	74.8	1070	996	93.1
7.	1976–77	1,200	199	16.6	6500	3,323	51.1
8.	1977–78	1,350	311	23.0	1,700	62	3.6
9.	1978–79	1,360	923	67.9	1,650	176	10.7
10.	1979–80	2,500	803	32.1	1,600	371	23.2
11.	1980–81	2,880	1,127	39.1	1960	726	27.0
12.	1981-82	3,680	1,419	38.6	2560	1,390	54.3
13.	1982–83	6,400	1,876	35.6	3200	1,443	45.1
14.	1983–84	6,400	1,876	29.3	1540	1,200	77.9
15.	1984–85	5,690	1,713	30.1	2300	1,211	52.7

	C.C. Users		Over All		
Target	Achievement		Target	Achievement	
No.	No.	%age	No.	No.	%age
9	10	11	12	13	14
3,670	3,457	94.2	1,686	903	53.5
8,715	3,787	43.4	1,574	935	59.5
9,930	4,509	45.4	727	1,141	66.1
13,080	5,971	45.6	2,232	1,103	49.4
13,073	4,231	32.4	2,314	984	42.5
15,060	6,953	43.5	2,707	103	66.6
22,000	4,390	19.9	8,733	3,755	43.0
3,000	3,658	121.9	2,317	369	15.9
15,000	4,778	31.9	2,936	750	25.5
22,500	6,070	27.0	3,683	976	26.5
21.200	6,183	29.2	4,098	1,445	35.3
21.600	5,736	26.6	4,987	2,183	43.3
22,400	3,534	15.8	—	—	—
22,400	3,401	15.2	155	413	27.7
24,880	2,240	9.6	132	47	35.6

The Fourth Joint Conference of Central Councils of Health and Family Welfare has recommended that the package including Maternity, Child Care and Nutrition Services should form an integral part of the family welfare service. The conference further recommended that adequate facilities should be provided in rural areas by opening additional maternity hospitals and postmortem units. For speedier development of infrastructure facilities for the opening of additional sub-centres under Primary Health Centres directly under the Central Government was considered desirable.

CHAPTER XVI

SOCIAL SERVICES AND VOLUNTARY ORGANISATIONS

In the post independence era the rapid industrialisation and urbanisation have shaken the traditional social order and have generated many new social problems in Delhi. The growth of population from 26.58 lacs in 1961 to 62.20 lacs in 1981 owing to large influx of people from other parts of country have added to these problems. Juvenile delinquency, beggary and vagrancy, crime against women and unemployment are some of the major social problems of Delhi. The handicapped, the destitute, the old and the infirm, the women, scheduled castes and the poor children stand neglected in this environment. These problems are basically urban in character but the fast growing urbanisation has obliterated the line between the rural and the urban. Quite naturally these problems have crept in rural Delhi as well.

As the problems are urban in character the social service programmes also had urban orientation to start with, but gradually these were extended to cover rural Delhi as well. Though meagre by all standards these services cover the neglected rural areas is an encouraging sign.

Directorate of Social Welfare

To start with the social welfare work in the Union Territory of Delhi was the responsibility of the Directorate of Education. But in 1959, the Department of Social Welfare was established to provide better service to the people. It had only three institutions to start with. Gradually new institutions and services were started and by 1972, the Department had as many as 42 institutions and covered almost every field in social welfare. In view of the growing responsibilities of the Department it was made into a Directorate. The services of the Directorate cover both urban and rural areas.

Integrated Child Development Services

The Directorate of Social Welfare has started four projects in rural Delhi under the Integrated Child Development Services scheme (ICDS). It is an effort to deliver at the door step, a minimum package of health, nutrition and education to the children in the 0-6 age group. This scheme also covers the nursing and expectant mothers. Under this scheme, each project comprises 100 *anganwadis* covering a population of about one lakh. As the main aim of the scheme is to cover the poor, six of these projects have been located in the resettlement colonies. The projects are located as follows:

1. Mangol Puri
2. Nand Nagri
3. Sultan Puri
4. Kanjhawala

5. Trilok Puri
6. Jahangir Puri
7. Seema Puri
8. Mehrauli
9. Alipur
10. Najafgarh

These Integrated Development Services endeavour to provide nutritional education to people through Mahila Mandals and other social organisations with a view to improve the nutritional standards of rural people. Demonstrations are frequently organised in the villages to educate the people in this respect. UNICEF provides vital help in running the Integrated Child Development Services. Four Integrated Child Development Services projects have been sanctioned by the Government of India for rural Delhi recently. These will help to raise the nutritional standard of the rural population.

Welfare of the Scheduled Castes, Scheduled Tribes and Other Backward Classes

The Directorate for the Welfare of Scheduled Cases and Scheduled Tribes and other Backward Classes is responsible for the implementation of various schemes for socio-economic development of economically weaker sections of the society. The total population of scheduled castes in the Union Territory of Delhi according to the 1981 Census was 11.2 lakhs-10.18 lakhs urban and 1.04 lakhs rural. Most of the scheduled caste families in rural Delhi are scattered in 400 Harijan *bástis*. The main schemes which are being implemented by the Directorate for their benefit are as follows;

(i) **Vocational and Technical Scholarships to Scheduled Castes**

Under this scheme, Rs. 60 and Rs. 100 per month are given to day scholars and boarders respectively as scholarship to undergo training in various I.T.Is run by the Directorate of Technical Education, Delhi Administration. For 1985-86, a provision of Rs. 3.00 lakhs has been made to cover 550 scheduled caste students. A provision of Rs. 5.50 lakhs is proposed for 1986-87 as the number of students is likely to go up from 550 to 575 The figures for rural Delhi are not separately available.

(ii) **Hostel for Scheduled Caste Boys**

To provide appropriate educational environment to scheduled caste students for higher education, one hostel was opened at Madipur. Free boarding and lodging facilities are made available to deserving candidates in the hostel.

(iii) **Free supply of Books and Stationary to Scheduled Caste Students**

Under this scheme scheduled caste students are given subsidy for the purchase of books and stationery-Rs. 10 and Rs. 15-per month for classes 6 to 8 and 9 to 12 respectively. An amount of Rs. 50-lakhs was approved for 1985-86 and about 40,000 students were to benefit from this scheme.

(iv) **Subsidy for small Scale and Cottage Industries**

Under this scheme, a subsidy of Rs. 500– is given to members of scheduled castes and scheduled tribes in kind such as sewing machines, *dhobi* presses and tools. This subsidy is given to families with an annual income of Rs. 3,600 or below to enable them to supplement their income. During the Sixth Plan (1980–85) an expenditure of Rs. 47.50 lakhs was incurred under this scheme to benefit 13,000 families. For the Seventh Plan an amount of Rs. 60.00 lakhs has been approved to help 12,000 families.

(v) **Improvement of Harijan Bastis**

This is an important on going scheme of the Administration implemented through Municipal Corporation of Delhi and the Flood Department of Delhi Administration. It includes repair of *chaupals*, construction of common bathrooms, latrines, drains, pavements etc. in Harijan localities of rural Delhi. In the Seventh Plan, it is proposed to extend the benefit of this scheme to urbanised villages as well as to the colonies which have come up outside the *lal dora* due to allotment of house-sites by Government.

(vi) **Housing Subsidy to Scheduled Castes in Rural Areas**

Under this scheme, a subsidy of Rs. 2000– is given to a scheduled caste, who owns a plot of 60 sq. yards within the *lal dora* of the Union Territory of Delhi to construct a *pucca* house. The amount is paid in two equal instalments of Rs. 1,000 each to persons with an annual income of Rs. 3,600 or below.

Under this scheme, an outlay of Rs. 145/– lakhs was made in the Sixth Five Year Plan. Only Rs. 13.13 lakhs could, however, be spent upto 1984–85 to benefit 1,064 families. It is proposed to enhance the amount of housing subsidy from Rs. 2,000 to Rs. 4,500 from 1985-86. For the Seventh Five Year Plan a provision of Rs. 55.00 lakhs has been made to benefit 1,250 families.

It may be mentioned here that under the 20 point programme, initiated in 1975 many landless Harijans were allotted house-sites measuring about 120 sq. yds. on a nominal rent of 5 paise per sq. yard. Such house-sites were allotted by *Gaon Panchayats* for a period of nine years.

(vii) **Improvement in Living Conditions of Scheduled Castes**

There are about 400 Harijan *bastis* in rural Delhi. The scheduled castes living in these *bastis* and other parts of Delhi cannot normally afford electric and water connection due to their poor condition. In order to provide them with these basic amenities the Government of India formulated this scheme during 1983-84.

The scheme provides financial assistance of Rs. 500 for water connection, Rs. 250- for electric connection and Rs. 500 for conversion of dry latrine into water borne latrine for those families whose income does not exceed Rs. 750 per month. The

Delhi Electric Supply Unit has been given Rs. 2.40 lakhs to provide 1,500 electric connections to scheduled castes during 1984-85. An outlay of Rs. 2.50 lakhs has been made for 1985-86 to benefit 1,000 families. A provision of Rs. 25.00 lakhs has been made for the Seventh Plan so as to benefit 5,500 families.

Promotion of Mahila Mandals in Villages

Under this scheme, launched in late seventies, each registered *Mahila Mandal* is given an assistance of Rs. 1,285. During 1979-83, the number of *Mandals* assisted in each blocks was as follows:

1979-80	Mehrauli Block	5 *Mandals*
1980-81	Najafgarh	10 *Mandals*
1981-82	Shahdara and Alipur	8 *Mandals*
1982-83	Kanjhawala	10 *Mandals*

In 1975-76, a scheme to train women workers was started so that they could run *Mahila Mandals* efficiently. During 1975-79, 328 women were trained in the job. In 1979-80, training was imparted to women from Alipur and Shahdara Blocks. The broad objectives of the scheme are as follows:

1. Imparting technical know-how about improved farming and home practices.
2. Promotion of leadership programmes like *Mahila Mandals* and *Yuvati Mandals*.
3. Associating women with techniques of group work.
4. Preparing women for effective extension work
5. Creating awareness in matters like family planning improved nutrition, vegetable cultivation, backyard poultry, small savings etc.

A budget provision of Rs. 0.90 lakhs each for 1979-80 and 1980-81 has been made for the scheme. During 1980-81, 450 women were trained for this purpose.

Incentive Awards to Mahila Mandals

This scheme came in operation in 1975 76. The first awards were however, given only in 1976-77. During the year 1976, 1977, 1978 and 1979 5, 15, 30 and 60 awards respectively were given to the best performing *Mandals*.

District Rural Development Agency

This Agency is playing an important part in rural development since its inception in 1971. In the beginning, it was known as the Marginal Farmers and Agricultural Labourers Development Agency (MFALDA). It started functioning in 1971-72 in two Blocks. In 1974-75, its activities extended to all the five Blocks under the name Small Farmers Development Agency (SFDA). On 2nd October, 1980 its nomenclature was changed to District Rural Development Agency (DRDA) at the instance of the Central Government, and all the five Blocks covering 217 villages came under its purview.

The District Rural Development Agency is engaged in several socio-economic welfare activities in rural Delhi through Integrated Rural Development Programme, National Rural Employment Programme, Rural Landless Employment Guarantee Programme etc. These are on going programmes and their objective is poverty eradication and employment generation in rural Delhi.

1. **Integrated Rural Development Programme (IRDP)**

It is a centrally sponsored scheme. The basic objective of this scheme is to evolve an integrated strategy so that persons below the poverty line can generate additional sources of income. This programme is being implemented in all the five Blocks of rural Delhi viz. Alipur, Kanjhawala, Mehrauli, Najafgarh and Shahdara. For implementation of this programme, full grant-in-aid is received from the Ministry of Rural Development. Agriculture, minor irrigation, animal husbandry, Industry, Services and Business (I.S.B.), Training of Rural Youth for Self-employment (TRYSEM) are some of the schemes under this programme. District Rural Development Agency gives 25% subsidy to small farmers and 33.3% to other identified families. In case of Co-operative Societies and Panchayats, the amount of subsidy for community work is upto 50 per cent.

Under District Rural Development Agency 175 lakhs were spent on various schemes during the 6th plan. More than seventeen thousand benefitted from these schemes in rural Delhi. The details of expenditure during the plan period are given in the following table:

Table-1

Expenditure under IRDP

Year	Allocation in lakhs	Expenditure	Families	Number of scheduled caste families
1980-81	25.00	23.94	25,61	711
1981-82	30.00	18.69	20,40	680
1982-83	40.00	60.46	5,027	1523
1983-84	40.00	52.93	4,017	968
1984-85	40.00	40.00 (exptected)	3,000	900
Total	175.00	196.02	16,645	4,782

During the Seventh Plan, the IRDP was mainly to cover the secondary and tertiary sectors as scope under primary sector had depleted due to fast urbanisation. However small and marginal farmers continued to receive help under different schemes for increased agricultural production. Under IRDP as many as 15,000 families were to be covered during the plan period. Of the 3,000 families to be covered every year, 30% were to be scheduled castes. In financial terms, this involved Rs. 40,00 lakhs per year and Rs. 200 lakhs for the entire plan period. Of the 15,000 beneficiaries 6,000 were to be covered under TRYSEM and 3,825 under I.B.S.

Table—2

Physical/Financial Projected Targets for the 7th Plan Year-Wise/ Itemwise under Integrated Rural Development Programme (Physical) No. of Beneficiaries

(*Financial in lakhs*)

Sl.No. Item	1985–86		1986–87		1987–88		1988–89		1989–90		Total 7th Plan	
	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
1. Agriculture	375	0.75	375	0.75	375	0.75	375	0.75	375	0.75	1875	3.75
2. Minor Irrigation	10	0.30	10	0.30	10	0.30	10	0.30	10	0.30	50	1.50
3. Animal Husbandary	420	5.32	420	5.32	420	5.32	420	5.32	420	5.32	2100	26.60
4. Trysem	1200	9.60	1200	9.60	1200	9.60	1200	9.60	1200	9.60	6000	48.00
5. I.S.B.	765	14.13	765	14.13	765	14.13	765	14.13	765	14.13	3825	70.65
6. Special Programme	230	5.40	230	5.40	230	5.40	230	5.40	230	5.40	1150	27.00
7. Survey	—	0.50	—	0.50	—	0.50	—	0.50	—	0.50	—	2.50
8. Admn.	—	4.00	—	4.00	—	4.00	—	4.40	—	4.00	—	20.00
Total	3000	40.00	3000	40.00	3000	40.00	3000	40.00	3000	40.00	15000	200.00

component. The scope of IRDP is likely to enlarge further when the resettlement colonies within the geographical limits of the Blocks, are also included in this programme. The details of the expenditure to be incurred under the IRDP schemes are given in the table 2.

2. **National Rural Employment Programme (NREP)**

The NREP is also a centrally sponsored scheme. It aims to generate additional employment for the unemployed and the under employed rural population, specially during the lean seasons of agricultural work. The objective is to improve the nutritional status and living standard of the rural poor. The Agency receives full grant for implementing various schemes under this programme.

The programme was started in Delhi in 1983 and a sum of Rs. 15.59 lakh was made available for implementing it in 1983-84. But due to some practical difficulties, only Rs. 4.03 lakhs could be utilized. In physical terms, 15,626 mandays of employment were generated against the revised target of 15,000 mandays. Under the programme, 52,455 trees were planted and three tailoring training centres were set up. In 1984-85, an outlay of Rs. 16.00 lakhs was made to generate 20,000 mandays of employment. Construction of 10 tailoring training centres, 250 dwelling units for scheduled caste families, development of 430 house sites and planting of 26,350 trees was taken up under this programme.

During the 7th Plan (1985-90) the NREP would concentrate on social forestry, construction of community assets like *chaupals*, community latrines, community libraries and reading rooms, play grounds, tailoring-cum-production centres and recreation centres in rural Delhi. The programme would promote social consciousness among the rural masses and create employment opportunities for them. 50 per cent of the total outlay i.e. 80 lakhs, under this scheme would be used on the social forestry component.

Annual plan in respect of projects to be taken up under NREP during 1985-86 is given in table 3

Note: 1. The projects included in the action plan have already been approved by the Governing Body/E.C.(D) except social forestry for which the provision has been made in accordance with the NREP guidelines.

2. The average wage rate has been taken as Rs. 20,000 per day for civil works and Rs. 15,000 per day for social forestry.

3. The expenditure over and above the annual allocation of Rs. 16.00 lakhs will be met out of the previous year's carry over which is about Rs. 3 lakhs. A part of it will also be set apart for meeting the escalation in costs.

Table—3

Annual Plan in Respect of Projects to be Taken up Under NREP During 1985–86

Sl.No.	Name of the Project	Resources required during the current year in lakhs					
		Non wage component					
		Admn. expendi-ture including contingencies etc.	Cost of material	Wages	Total columns 3+4+5 (in lakhs)	Quantity of food-grains (in Mts)	No. of man-days likely to be generated during the year (in lakhs)
1	2	3	4	5	6	7	8
I.	Construction of 250 dwelling units for Harijans as already incorporated in the action plan for 1984–85 (NREP share at the rate of Rs. 5.000 per unit)	0.56	5.04	5.60	11.20	28.00	0.2800
	(1) Village-Mandoli in Shahdra Block–50						
	(2) Village-Hassanpur in Najafgarh Block–17						
	(3) Village–Galibpur in Najafgarh Block–33						
	(4) Village–Mukandpur in Alipur Block–50						
	(5) Village-Hirankundna in Nangloi Block–50						
	(6) Village–Asola in Mehrauli Biock–50						
II.	Construction of 8 Tailoring and Training Centres						
	1. Village–Patparganj in Shahdara Block	Rs. 2500					
	2. Village–Jonapur in Mehrauli Block	Rs. 2500					

1	2	3	4	5	6	7	8
3.	Village-Kazipur in Najafgarh Block	Rs. 2500					
4.	Village-Madangarhi in Mehrauli Block	Rs. 2500					
5.	Village Kair in Najafgarh Block	Rs. 2500					
6.	Village-Kanjhawala in Nangloi Block	Rs. 7500	0.0125	0.1125	0.125	0.25	0.00625
7.	Village-Gheora in Nangloi Block	Rs. 2500					
8.	Village-Alipur in Alipur Block	Rs. 2500					
		Rs. 25000					
III.	Development of House Sites at village Rangpuri in Mehrauli Block	0 6	0.006	1.634	1.72	8.170	0.0817
IV.	Construction of First-Aid-Training Centre at village Rani Khera in Nangloi Block	0.01214	0.10926	0.1214	0.2428	0.607	0.00607
V.	Social Forestry Work	0.18	0.73	2.62	3.53	17.866	0.17866
		0.93939	5.99176	10.1004	16.9428	55.268	0.55268

3. **Rural Landless Employment Guarantee Programme (RLEGP)**

This centrally sponsored programme was dedicated to the nation by Smt. Indira Gandhi on 15th August, 1983. Its basic objectives were:

(i) To improve and expand employment opportunities for rural landless with a view to providing guarantee of employment upto 100 days in a year to at least one member of every landless labour household.

(ii) To create durable assets to strengthen the rural infrastructure for a rapid growth of rural economy.

During 1983-84, nothing concrete could be done under this scheme. In 1984-85, Rs. 117.27 lakhs were approved for five projects relating to the construction of rural roads and filling up of ground depressions. 30,000 man days of employment were to be generated in this way.

For the seventh plan an amount of Rs. 1.00 crore (Rs. 20.00 lakhs per year) is proposed to be spent in generating 1.50 lakh mandays of employment (30,000 per year). Projects like social forestry, link roads and earth levelling are to be undertaken under this programme.

Annual Plan in respect of projects to be taken up under RLEGP during the year 1985-86 is given in tables.

4. **Assistance to small and Marginal Formers**

Majority of the land holders in rural Delhi are small and marginal farmers. This centrally sponsored programme was taken up for their benefit in September 1983. It has the following three components:

(i) Minor Irrigation

(ii) Plantation of fruits/fuel trees

(iii) Land development, distribution of mini kits to farmers and administration.

Under this scheme 25 per cent subsidy is given to small farmers and 33⅓ per cent subsidy to marginal or scheduled caste farmers for taking up schemes under the first two components.

For 1984-85, an allocation of Rs. 25.000 lakhs (Rs. 5.00 lakhs per Block) had been approved for the distribution of 2.000 mini kits to small and marginal farmers. Trees are essential for the improvement of environment. For this purpose, a plant nursery is being established for developing quality plants for distribution to small and marginal farmers at subsidised rates. During the 7th Plan Rs. 75 lakhs (Rs. 15.00 lakhs per year) are proposed to be allocated for the distribution of 10,000 mini kits (2,000 per year) to farmers. The details are given in table 5.

Table—4

Annual Plan for Projects to be undertaken under RLEGP during 1985–86

Sl.No.	Name of the project	Resources required during the year (in lakhs)					
		Non wage component					
		Admn. expenditure including contingencies	Cost of material etc.	Wage	Total Clmns. 3+4+5	Quantity of food-grains in mts.	No. of man days likely to be generated
1	2	3	4	5	6	7	8
	CONSTRUCTION WORKS						
1.	*Najafgarh Block* Development of land for benefit of Harijans in village Nangli Sakrawati	0.03	—	0.66	0.69	2.28	3280
2.	*Alipur Block*: Construction of link road from village Holambi Kalan to Daryapur Jhal (1.8).	0.12	0.96	1.23	2.31	6.135	6135
3.	*Nangloi Block*: (a) Construction of link road village Ranhola to village Mundka (1.5 km) (b) Construction of approach road from Bakkarwala Road to Keshav Dev Model School in Nangloi Block	0.11	0.57	1.39	2.07	6.950	6950
4.	*Mehrauli Block*: Construction of approach to Harijan *basti* of village Ghitorni (1.9 km)	0.12	1.0	2.17	2.35	7.830	7830
6.	*Shahdara Block*: Construction of village link road leading to *Chopal* at village Gharoli	0.15	0.94	1.84	2.93	9.200	9200
II.	Social forestry works in rural areas	0.09	0.90	0.94	1.93	4.700	4700
		0.52	2.75	7.32	10.59	48.800	48800
		1.14	7.18	14.55	22.87	86.895	86895

Total amount say Rs. 23 *lakhs*: *mandays* 86805

Note: 1. The Projects included in the Action Plan have been duly sanctioned by Government of India.

2. The expenditure over and above the annual allocation of Rs. 16 lakhs will be met out of previous year's carry over which works out to be about Rs. 6.00 lakhs.

3. The average wage rate in respect of civil works has been taken at Rs. 20/- per day and that for social forestry at Rs. 15.00 per day.

4. The provisions made represent the balance expenditure to be incurred during 1985-86 in respect of continuing project.

Table—5

Draft Seventh Five Year Plan (1985–90) *and Annual Plan* 1985-86 *Physical Targets and Achievements*

S.No.	Item	Code No.	Unit	Sixth five year plan (1980-85) Target	1980-83 achievement	1983-84 achievement	1984-85 Target	1984-85 achievement	Seventh Plan 1985-90 Target proposed	1983-86 Target proposed
1	2	3	4	5	6	7	8	9	10	11
1.	Integrated Rural Development Programme									
(i)	Beneficiaries identified		No	15 000	10,576	1,700	3,000	3,000	15,000	3,000
(ii)	Beneficiaries assisted		,,	15,000	9,628	4,077	3,000	3,000	15,000	3,000
(iii)	Scheduled caste/tribe beneficiaries		,,	4,500	2,914	968	900	4,500	4,500	900
(iv)	Beneficiaries assisted under industries, services and business		,,	—	458	992	765	765	3,825	765
(v)	Youth trained/being trained under TRYSEM		,,	—	1,365	855	1,200	1,200	6,000	1,200
2.	Assistance to small and marginal farmers for increasing agriculture		,,	—	—	1,000	2,000	2,000	10,000	2,000
3.	Rural landless Employment Guarantee Programme Mandays		,,	—	—	—	30,000	30,000	15,000	30,000
4.	National Rural Employment Programme Employment		,,	—	—	15,626	20,000	20,000	100,000	20,000
5.	Developmet of women, Block to be covered		,,	—	—	—	—	—	—	—
	(Setting up of EDP Cell in District Rural Development Agency)									

5. Scheme for Development of Women and Children

The progress of rural women and their participation in developmental activities has always been emphasised by the government. Efforts were therefore, made to cover women, particularly those below the poverty line under IRDP. The objective was to provide supporting services to women under the scheme: (i) by organising them in groups to take up economically viable activities (ii) by providing them supportive services such as child care when they are at work and (iii) by organising child care facilities such as health care, nursing and security at work sites.

At present, the following schemes are included in the programme:

1. Immunisation programme in selected areas of urban and rural Delhi.
2. Income generating activities for women.
3. Training to improve the anti-natal and post-natal care of mothers and children.
4. Disability prevention and rehabilitation using low cost aids and methods.
5. Creches and pre-school education
6. Water and latrines.
7. Child to Child activities (education, recreation and sports).

A beginning was made in this regard in Kanjhawala Block on an experimental basis and the first scheme has been successfully implemented there. It will be gradually expanded to other Blocks. UNICEF has provided financial, technical and material help to the Directorate of Social Welfare, Directorate of Health Services, Municipal Corporation of Delhi and District Rural Development Agency for the implementation of the first scheme. UNICEF has agreed to finance the second scheme also. It has been decided to start this scheme in all the villages of Kanjawala Block.

All these seven programmes are to be implemented during the Seventh Plan. *Mukhya Sevikas* and *Gram Sevikas* as field workers are to play an important part in these schemes. A cell in the District Rural Development Agency will supervise their activities.

For income generation activities each *Gram Sevika* will be given charge of four to five villages. Women will be given assistance to start their own economic activity Where it is not found possible to start one's own unit, a group of 15 to 20 women will be constituted to take up some joint economic activity. They will be imparted training in the formulation of the project, establishment of the unit, running of machines, production, sale etc. Services of voluntary agencies, wherever possible, shall be utilized. A provision of Rs. 10,000 would be made for each group to build up the required infrastructure and marketing support. Besides this, Rs. 5,000 will be provided to each group to purchase equipment for training and child care centres.

Table 6

Draft Seventh Five Year Plan (1985–90) *and Annual Plan* (1985–86) *Development Schemes/Reports*

Name of the Scheme/Project	Sixth Five year plan (1980–85) agreed outlay	1980–85 actual expenditure	1983–84 actual expenditure	1984–85		Seventh Plan 1985–90		1985-86	
				appx. outlay	anti-expd.	proposed outlay	of which content	proposed outlay	of which content
1	2	3	4	5	6	7	8	9	10
Integrated Rural Development Programme	175.00	103.29	52.93	40.00	40.00	200.00	—	40.00	—
National Rural Development Programme	37.80	—	4.03	16.00	16.00	80.00	—	16 00	—
Rural Landless Employment Guarantee Programme	17.27	—	—	17.27	17.27	100.00	—	20.00	—
Assistance to Small & Marginal Farmers for increasing Agri-Production	50.00	—	0 39	25.00	25.00	75.00	—	15 00	—
Development of women and children	—	—	—	—	1.59	21.00	—	4.20	—
Setting up of E.D.P. Cell in District Rural Development Agency	2.50	—	—	2.50	2.50	50.00	10.00	10.00	6.00

Beside training the women, the officials viz. *Mukhya Sevikas* and *Gram Seivikas* shall also be imparted training in various aspects of the programme.

For each of the seven schemes, included in this programme, separate project reports will be prepared and RDP funds, alongwith bank loans will be provided where ever required. Entire expenditure of the scheme will be borne by UNICEF in the current year. The quantum of aid for the Seventh Plan is yet to be decided but for 1985-86, a provision of Rs. 4.20 lakhs had been proposed. The details of the expenditure to be incurred under these schemes during Seventh Plan are given in table 6 :

The Department of Community Services (MCD)

The Department is running 21 community centres in Narela and Najafgarh zones of rural Delhi since 1976. The centres are located in *chaupals* or rent free accommodation arranged by the villagers. The names of the centres and their activities are given below:

Narela Zone

1.	Bawana	(i) Nursery class
		(ii) Craft class
		(iii) Reading room
2.	Narela	(i) Nursery class
		(ii) Craft class
		(iii) Reading room
3.	Bajipur	(i) Reading room
4.	Mungeshpur	(i) Reading room
5.	Bhakhtawarpur	(i) Reading room
6.	Lampur	(i) -do-
7.	Ghogha	(i) -do-
8.	Dariapur	(i) -do-
		(ii) Craft class
9.	Harevli	(i) Reading room
10.	Nangal Thakran	(i) -do-
11.	Majra Dabas	(i) Reading room
		(ii) Craft class
12.	Ladpur	(i) Craft class
		(ii) Reading room
13	Karala	(i) Craft class

Najafgarh Zone

1.	Kair	(i) Reading room
		(ii) Coaching class

2.	Mundhela Kalan	(i) Nursery class
3.	Ujwa	(i) Craft class
		(ii) Reading room
4.	Palam Colony	(i) Craft class
		(ii) Reading room
5.	Malikpur	(i) Craft class
		(ii) Reading room
6.	Tikri Kalan	(i) Craft class
		(ii) Reading room
7.	Goman Hera	(i) Craft class
		(ii) Reading room
8.	Pooth Kalan	(i) Reading room

Voluntary Organisations

The concept of social service implies the urge to help fellow beings in distress. In India, earlier this requirement was adequately met by institutions like the joint family system, the caste system and the *panchayat* system. Rapid modernisation and urbanisation has weakened these institutions and therefore, the responsibility of social service has shifted to the Government and voluntary organisations. In the present context the social services are meant to help those who are physically, mentally or otherwise handicapped. Relief to the victims of famine, drought, fire, epidemics or other natural calamities also comes within the ambit of social service.

There are a number of organisations engaged in social service work in Delhi. A list of organisations working for the uplift of rural poor is given below:

Indian Council for Child Welfare

4, Dean Dayal Upadhyaya Marg
New Delhi-110002
Established in 1952

Objectives

Initiating and undertaking child welfare services in India; enactment of laws for the benefit of children; Organising training schemes, orientation and refresher courses; cooperating and collaborating with Government and other agencies to meet the needs of children.

Present Activities

Training to grass-root level workers in child welfare through *Anganwadi* and *Bal Sevika* training programmes; providing financial assistance to children from weaker sections of the society to pursue their education through sponsorship programmes; running *Balwadis* and creaches for children of working and ailing

mothers; deputing in service personnel for higher training in the field of child welfare; organising national integration camps and national painting competitions to encourage children. Awarding children who have distinguished themselves by performing outstanding deeds of courage.

Coverage

Programmes of the Council are implemented through out the country through its state councils and District Councils.

2. **Child Guidance Centre**
Department of Social work,
3, University Road, Delhi-110007.

Objectives

(i) Providing diagnostic and treatment facilities to children with emotional and behavioural problems, counselling and guidance to their parents.
(ii) Promoting community mental health.

Coverage

Delhi and neighbouring areas.

3. **Delhi Women's Welfare Association**
150, Deepali, Pitampura Road-42,
Delhi-110034.
Established in 1971.

Objectives

(i) Social Welfare
(ii) Adult Education
(iii) Moral and physical hygiene
(iv) Inculcation of civic sense
(v) General uplift of the poor and the needy
(vi) Advisory and consultative services to women on their personal problems.
(vii) Child care and education.

Coverage

Azadpur village, Rithala village and Kewal Park area.

4. **Gyandeep Education Society,**
251/3-b-I, Bholanath Nagar,
Shahdara, Delhi-32.
Established in 1971.

Objectives

(i) To provide basic education and training in handicrafts, cottage industries, art and music to children by opening schools and to create citizens imbued

with love and respect for the country and to propogate the idea of service to humanity.

(ii) To help, encourage and assist in spreading education and culture among Indians.

(iii) To establish, maintain and manage schools, hostels, libraries, reading rooms or other centres of similar nature.

(iv) To organise debates, competitions elections and cultural programmes to encourage studies in Indian culture and spread of knowledge.

(v) To affiliate, associate or co-operate with any other society or association having similar aims and objectives.

Coverage

Trans-Yamuna area, above 650 children have benefitted from this Society.

5. **All India Panchayat Parishad,**
Panchayat Dham, Patpar Ganj
Delhi-110092.
Established in 1958.

Objectives

(a) To bring together on a common platform the *panchayat raj* institutions in the country (at the village, block and district level).

(b) To educate public opinion on *panchayat raj* so that there is greater public participation in the process of self government.

(c) To promote the spirit of community, self-help, mutual aid, and socio-economic development among village folk.

(d) To inculcate in *panchayat raj* personnel a sense of responsibility towards the community in general and towards economically and socially weaker sections in particular.

(e) To undertake the training of the related personnel and, to that end, establish training schools or institutions.

(f) To co-operate with the central and state governments, educational institutions and voluntary organisations to achieve the above objectives.

(g) To carry on study and research in subjects related to *panchayat raj* in particular and to rural life and problems in general.

(h) To conduct surveys, evaluation projects, field investigations etc.

(i) To prepare and publish books, pamphlets, periodicals, papers etc.

Coverage

Whole country through village *Panchayats*, *Panchayat Samities* and *Zila Parishads.*

6. Delhi Council for Child Welfare

Qudsia Garden, Yamuna Marg,
Civil Lines, Delhi-54.
Established in 1948.

Objectives

(i) To initiate and help directly or indirectly through its branches, any scheme for the furtherance of child welfare in Delhi.

(ii) To help disseminate knowledge and educate public opinion about the child welfare programmes.

(iii) To endeavour for the enactment and change of laws on child welfare and to work towards the implementation of such laws.

(iv) To provide nutritious food to poor children in the urban, rural and resettlement areas of Delhi.

(v) To acquire any movable and immovable property for the benefit of child welfare.

(vi) To open *Balwadis* and creches for poor children in villages as well as in the city.

(vi) To establish contact with other Indian or foreign organisations to acquire knowledge regarding child welfare.

Coverage

Auchandi, Bawana, Bhalswa, Dabri, Daryapur, Gadaipur, Karala, Qutab Garh, Khera khurd, Madanpur Dabas, Pitampura, Pooth Kalan, Ranhola, Shahpur Jat, Sambhalka, Sanoth, Shahabad, Samaspur and Sultan Pur.
About 995 people have benefitted from this scheme.

7. Young Women's, Christian Association

Rural Development Project, Najafgarh Block.

Objectives

Training : for rural women and other beneficiaries.
Adult education
Fostering social awareness and self reliance
Gainful self-employment

Coverage

Rewla Khanpur, Hasanpur, Shikarpur and Old Roshanpura-Najafgarh.

The number of beneficiaries is as follows:

Rewla Khanpur —125
Hasanpur —100
Shikarpur —150 and
Old Roshanpura —200

8. **Association of Voluntary Agencies for Rural Development,**
5, (FF) Institutional Area,
Deen Dayal Upadhyaya Marg,
New Delhi-110002.
(Established in 1958)

Objectives and Present Activities

To serve as a joint platform for all voluntary agencies.

9. **Delhi Bharatiya Grameen Mahila Sangh,**
B-14, Sujan Park, New Delhi-110003,
(Established in 1963.)

Objectives

Uplift of rural women and children.

Present Activities

(i) Balwadis for children, craft classes at 17 centres, 18 creches for children of working and ailing rural women and 6 projects under socio-economic programmes;
(ii) *Dalia* and *masala* grinding on hand *chakki*
(iii) Machine knitting
(iv) Vocational training in cutting and tailoring at four centres
(v) Dairy farming
(vi) Poultry farming
(vii) Weaving of cotton durries.

Coverage

Shahdara Block : Tahirpur, Mandavli, Gharoli, Molarband, Jaitpur, Tajpur, Pahari, Sherpur.

Mehrauli Block : Tikhand, Dakshinpuri, Humayunpur, Munirka, Vasantgaon. Alipur Block : Palla, Majra, Jhangola, Sagar. There are about 90 beneficiaries in each welfare centre.

10. **Church's Auxiliary for Social Action** (CASA)
Rachna Building 2, Rajendra Place,
Pusa Road, New Delhi-110008.
(Established in 1947.)

Objectives

(i) To strive for social justice within meaning of the phrase as stated in the preamble and the Directive Principles of State Policy of the Constitution, irrespective of caste, creed, region, language or religion.

(ii) To assist the poor in enforcing their rights provided by various legislations, both central and state.

(iii) To assist the poor to benefit from government and bank schemes meant for them.

(iv) To improve the educational level of the poor in a broader sense.

(v) To assist women to participate with men as equal partners.

(vi) To improve health level of the poor through health education.

(vii) To assist economically weaker sections to improve their economic standards through cooperative effort.

(viii) To promote information dissemination on nature conservation and afforestation.

Coverage

2,000 villages all over the country. Around 3,00,000 people have benefitted from this scheme.

CHAPTER XVII

PLACES OF INTEREST

The land of Delhi is literally littered with monuments, great and small, from Shahjahanabad (present old Delhi) to Lal Kot (city founded by Rai Pithora near Qutab). Delhi was built and rebuilt seven times during its long history and capital went on shifting from one place to another. The ancient most Delhi was located in the Old Fort area known as Indraprastha, the capital of the Pandavas.

By the time of the Mauryas, the centre of Delhi had shifted southwards where some rock edicts of Asoka have been discovered. During the Gupta age, it seems to have moved further south to Mehrauli where an iron pillar of Chandragupta II Vikramaditiva has been discovered. This was also the Delhi of the Rajput Tomars and the Chahmanas

The rulers of the Slave Dynasty choose the Qutab area of Delhi for their capital. Ala-ud-din Khilji shifted it to the area known as Siri. Ghiyas-ud-din shifted it further east to Tughlaqabad. Firuz Tughlaq however, built the city of Firuzabad or Firuz Shah Kotla some eight miles to the north of the capital. Sher Shah Suri shifted it further south to the site of the Old Fort. Akbar preferred Agra for his capital but Shahjahan rebuilt Delhi for his capital. The Britishers favoured north Delhi as the centre of their Government though finally their choice fell upon Raisina hills, south of Shahjahanabad and Firuz Shah Kotla.

In the process of constant shifting of the capital, the rural urban distinction in Delhi was affectively obliterated. What was urban during the period of the slave dynasty became neglected and assumed a rural character during the Tughlaq rule. In the process many old villages lost their identity altogether. The buildings of the capital at Qutab must have devoured many villages. Their remains were infact used for the construction of the new capital. The scattered monuments in and around the villages of Delhi clearly suggest their proximity to the seat of power in the past.

Most of the important monuments of Delhi have been graphically described in books on art and architecture. Here we shall refer to the monuments which are located in the villages or in their vicinity. The descriptions are not meant to be comprehensive and have been written with the limited purpose of familiarizing the reader with the important monuments.

Martyr's Memorial (Alipur)

During the first war of Indian Independence in 1857, Delhi provided a rallying point for the revolutionary forces. Army contingents from far off areas like Bareilly and

Neemuch converged on Delhi. The British troops stationed in Punjab marched to Delhi to resist them. On 7th June, they put up their camp in an open area adjoining the village of Alipur with the intention of launching an attack on the city from there. The villagers of Alipur opposed them and killed four British soldiers. The Britishers soon rallied and threatened to blow up the entire village. The villagers fled away to safety. To save the village, the *Numberdar* (village chief) submitted a list of seventy rebels to the British Commander who in turn got all of them hanged.

The martyr's memorial was erected on 8 March, 1973 to honour these patriots of Alipur.

Parmartha Niketan (Bakoli)

The Bakoli village near Alipur on the Shershah Suri Marg is well known for an *ashram* founded by His Holiness Shriram Bharati. Students get free education in the School attached to this *ashram*. Patients get free treatment in the *ashram* dispensary.

Swami Bharatiji's guru Paramahansa Swami Uma Shankaranandji Maharaj died here. His foot prints have been preserved at the *Samadhi*.

Khirki Masjid (Khirki)

This mosque is situated in village Khirki. It was built in 1375 A.D. by Khan-i-Jahan Junan Shah, the Prime Minister of Firuz Shah Tughlaq. The building looks impressive on account of the ingenious plan of raising the whole structure on a *tahakhana* or sub-structure of arches. The roof supported on 180 columns and 60 pilasters contains nine groups of nine small domes, which together with four domes on the gateways of the central mihrab chamber make it an impressive edifice.

Some people are inclined to idenify this monument as a fort. The four minarates standing at the four corners and a deep moat around does give it the look of a fort.

Satpula (Khirki)

Adjacent to the Khirki village in South Delhi is Satpula. It is said to have been built by Mohammad Shah Tughlaq in 1326 A.D. to regulate the impounded waters for the purpose of irrigation. It has seven sluice gates through which rain water of the area passed into the lake below and hence the name Satpula. It is a double-storeyed structure. The sluice gates are in ruins but the shutters are still there.

Ghoga Samadhi (Ghoga)

This Samadhi is located in the centre of Ghoga village. It is said that some two hundred years ago, a great saint lived there. Since he lived in a grove he became famous as 'Ghoga Sant' and the village came to be known as 'Ghoga Gaon' after him. The saint kept a lion and a goat as his pets. The people considered this spot sacred

and gradually a village came up around it. The *Samadhi* of this saint is a place of worship even today.

The *samadhi* is a 5 square metre structure. The sacred flame keeps burning at the *samadhi* all the twenty four hours. The residents of this village seek the blessing of the saint before embarking upon any venture.

Chor Minar (Begampur)

This round tower is situated near Begampur village. It stands on a raised terrace of about 6 metres height. There is a winding staircase inside. The walls are pierced with 225 holes. It is said that when thieves were executed the custom was to cut off their heads and stick them into these holes as a warning for others.

Chor Minar is said to have been built by Ala-ud-din Khilji. The story goes that a large number of Mughals settled in Delhi, during the reign of King Iltutmish. In 1398 A.D., when the Mughals embarked on the invasion of India these settlers expressed joy at the prospect of their clansmen conquering India. Unfortunately, for them the invading Mughals changed their mind and retraced their steps. Ala-ud-din Khilji angered by the misdemeanour of the local Mughals ordered their massacre. The heads of these slain Mughals were displayed on the Chor Minar to serve as a warning to subversive elements.

Begampuri-Masjid (Begampur)

A narrow road by the side of Aurobindo Ashram in south Delhi leads to the village of Begampur. Within the village is the Begampuri-Masjid, one of the seven mosques said to have been built by Khan-i-Jahan Junan Shah, prime minister of Firuz Shah Tughlaq.

The rubble-built structure of the mosque rises from a high plinth. It has gates on the north, south and the east with rows of windows on either side. The east gate functioned as the main entrance. The facade of the prayerhall is broken by twenty-four arched opening. the central one being the highest and flanked by tapering minarets in the Tughlaq style. The central prayer hall is surmounted by a large dome while small low domes, characteristic of Tughlaq architecture, rise on the roof from the central aisle and from the corridors. The location of mihrabs in the interior is indicated by five projections.

Bijai-Mandal (Begampur)

To the north of Begampuri-Masjid lies Bijai-Mandal. It is an unusual rubble-built massive octagonal structure on a high platform, with sloping sides in the Tughlaq fashion and a doorway at each cardinal point. Immediately to its east lie the remains of an arcaded residential building, which apparently formed part of a mansion. The

purpose of the building is, however, not clear. It is regarded as a bastion of Jahanpanah by some. Shaikh Hussan Tahir, a saint is believed to have used it as his residence during Sikandar Lodhi's reign (1489-1517). Muhmmad Shah Tughlaq (1325-51) is also said to have used it earlier as a tower for reviewing his troops.

Kalu-Sarai-Masjid (Begampur) Pl-5

It is a rubble-built plastered mosque. Originally there were seven arched openings in the facade of its prayer hall, some of which have now collapsed. It is surmounted by a series of low domes in the Tughlaq style. It is one of the seven mosques built by Khan-i-Jahan, the prime minister of Firuz Shah Tughlaq.

Dargah Hazrat Roshan Chirag (Chirag Dilli)

Saint Nasir-ud-din, better known as Roshan Chirag Dilli was a disciple of Sheikh Nizam-ud-din Auliya, whom he subsequently succeeded as the head of the Chishti saints. He was a contemporary of Muhammd Tughlaq and died in 1356 A.D. He was buried in the room in which he had lived, along with his saintly possessions. His saintly and austere life earned him the title of 'Chiragh Dilli' or 'The Lamp of Delhi'. A fine gate in the west wall leads to the shrine. The *Dargah* is entered from the east by a gate built by Firuz Shah in 1373 A.D. The tomb chamber is surrounded by a dome of red sandstone. The walls enclosing the shrine and the village were built by emperor Muhammd Shah in 1729.

Nearby is the tomb of Bahlol Lodi. The tomb is believed to have been built by Sikandar Lodi, the son and successor of Bahlol Lodi. It is an unusual type of tomb with five domes over it. The details of the sandstone decoration are all Hindu.

Qila (Chirag Dilli)

The fort at Chirag Dilli was built in 1728 by Mohammad Shah Rangila. 220 square yards in size initially it had four gates on its four sides and encircled the settlement of Chirag Dilli. In 1761, during the invasion of Ahmad Shah Abdali, the people of adjoining villages sought refuge in this fort. Over the centuries Chirag Dilli has spilled beyond the fort walls and now only two of its four main gates remain. The walls are 6 metre high and 1.5 metre thick. A tunnel connected this fort with Tughlaqabad Fort.

Mosque (Chirag Dilli)

A mosque stands on the open courtyard of the fort. An inscription engraved on this mosque read:

"Yahi masjid, yahi kaba, yahi takhte-Mohammad
Chale aao Musalmano, yahi gulzare Zannat hai."

(This is the mosque, the Qaba and the seat of Prophet Mohammad. Come all, you Musalmans, for this is the paradise.)

Besides the Dargah and the mosque, the tomb of Bahlol Lodi and Jahandar Shah's daughter are also located here. 'Ulta Chashma' is also near this place.

Kalidevi Temple (Bahapur)

This shrine at Kalkaji is dedicated to goddess Kali. It is said that once the gods, dwelling in the neighbourhood of the present temple were terrorised by the demons. They sought the help of Brahma who asked goddess Kushki Devi to kill the demons. Kushki Devi slaughtered them but failed to eliminate them because from each drop of their blood, which fell upon the earth a new demon was born. Then Parvati created Kali from the eyebrows of Kushki Devi. Kali obtained a complete victory by drinking the blood of slain demons before it fell to the ground. Thereupon Kali Devi made her abode on the battlefield and came to be worshipped as the chief divinity of the place. It is believed that an ancient temple lies buried under the present shrine. The oldest part of the existing temple was built in 1764 A.D., but the worship of Kali Devi is believed to have begun here during the time of Rai Pithora.

In 1816 A.D. Mirza Raja Kedar Nath, the *peskar* of Akbar II, added twelve rooms to the temple and surmounted the whole with a lofty pyramidal dome. The image of Kali completely covered with brocaded cloth is installed in the centre of the room, and screened off on three sides with red sandstone and marble railings. The screen on the west side bears two inscriptions-one in Persian and the other in Hindi which record the names of the goddess Kali and the builder of the screen. Two tigers carved out of red sandstone decorate the entrance of the temple. A large trident also of red sandstone, stands close to the tigers.

Shamsi Talab (Mehrauli)

This tank, once the pleasure resort of royalty, lies completely dry now. When built in 1229 A.D. by Iltutmish, it was a picturesque artificial lake, lined with red sandstone and covering about 40 hectares of land. This tank is of special significance to the Muslims on account of the story of its origin. It is said that when Iltutmish was intending to construct a tank in the area, the holy prophet mounted on a white steed appeared before him in a dream and indicated to him the spot where it should be built. In 1311 A.D., Allauddin Khilji cleaned the tank and built a domed pavilion in the middle of it This pavilion stands on a platform and comprises a domed *chhatri* supported on 12 stone pillars. Under the dome is a stone slab, bearing the mark of hoof, but not the original one, which has been removed. The tank was also repaired by Firuz Shah Tughlaq.

Pankha Mela (Mehrauli)

Sair-e-gul-faroshan popularly known as *Pankha Mela* was a popular cultural event during the last phase of the Mughal rule in Delhi. The festival was held after the monsoon when flower *Pankhas* were taken in procession to the temple of Yog Maya and the Dargah of Khwaja Qutb-ud-din by Hindus and Muslims respectively.

The procession used to be led by the emperor, the empress and the members of the royal family. Pandit Jawahar Lal Nehru revived this fair on August 22, 1953.

Yog Maya Temple (Mehrauli)

According to a tradition, this temple was originally built during the reign of Yudhisthira, the Pandava king and dedicated to Yog Maya, the sister of Lord Krishna. The existing shrine is, however, said to have been built, possibly on its ancient site in 1827 A.D. by Syed Mal, a noble of Emperor Akbar II. The temple and twenty one other associated buildings stand within a walled enclosure of 121.9 square metres. The distinguishing feature of the temple is its truncated pyramid and gilt edged pinnacle. It is about 12.8 metres high from the marble covered floor to the top of the pinnancle. The sacred stone covered with cloth, is placed in a marble nitch, 0.6 metre wide and 0.3 metre deep. Over this stone are suspended from the ceiling a few *pankhas*, which are offered on the occasions of the *Sair-e-gul faroshan* fair. Two stone made tigers kept in an iron cage, guard the shrine.

Adam Khan's Tomb (Mehrauli) Pl-6

It is situated on a high terrace about 366 metres to west of Qutab Minar, and is popularly known as *bhool bhulaiyan*. It was built by Akbar in 1562 A.D. over the remains of his wet nurse, Maham Anga and her son, Adham Khan. Architecturally, this tomb marked the end of the Lodi style which had been in vogue for nearly two centuries. It is built of grey sandstone and rubble masonry. The court is octagonal with a low round tower at each angle. The tomb chamber is surrounded by a *verandah*, with three arches on each of its eight sides. The dome, crowned by a red sandstone finial, is supported on a high 16-sided drum with a small minaret at each angle.

Dargah Qutab Saheb 'Kaki' (Mehrauli)

Harmat Khwaja Qutabuddin Bakhtiyar 'Kaki' was a disciple of the celebrated Sufi saint Khwaja Chishti of Ajmer. He came from Iran and his following spread among Hindus and Muslims alike. His earthen grave was built by his disciple Hazrat Baba Faridduin. King Sher Shah Suri provided it with a boundary wall and gate. Farrukhsiyar added some marble work to it. Aurangzeb also built a side wall at the *dargah*. The last Mughal Emperor Bahadur Shah Zafar made a fensing of sandal wood around the grave. The Nawab of Hyderabad also got a fence made here in 1930. Mahatma Gandhi had visited the shrine three days before he fell to the assassin's bullet. A marble railing was fixed at the *dargah* in 1957 by Pandit Jawahar Lal Nehru as per the wishes of Mahatma Gandhi.

The saint was called 'Kaki' with affection. The world 'kak' means loaf. It is said that the Khwaja could produce loaf with his supernatural powers when some poor or hungry approached him. Another story is that during his 40 days of fast he was fed by a saint Hazrat Khizh with small cakes, termed 'kaki'.

This spot was considered very sacred. The Mughal Kings, Bahadur Shah-I, Shah Alam-I, Shah-Alam-II and Akbar Shah-II chose it for their resting ground. During *phool-walon ki sair* big fans are offered at the *dargah* by the devotees.

Zafar Mahal (Mehrauli)

Close to the *dargah* of Qutab Saheb, is Zafar Mahal. It was built by King Akbar-II, but the main gate was added by Bahadur Shah Zafar (1847-57). Built of red stone and marble, it is about 17 metre high and 4 metre wide and is a double storeyed building. The monument is now in a dilapidated condition and only one of the seven arches stands today. The gate of this palace is perhaps the tallest surviving historical monument in Delhi.

Jahaz Mahal (Mehrauli) Pl. 7

Jahaz Mahal is a beautiful building on the outskirts of Mehrauli village. It is said to have been built by some traders for the use of a saint during the Lodi rule. A portion of the building was used as a mosque

The main gate to Jahaz Mahal is built of red sandstone and is typically Hindu in style. There is an open courtyard in the centre with a canopy. The hall above is laid with blue tiles. There is a row of rooms to the right of the gate. The building was probably given the name of Jahaz Mahal because the *Jharna* and the Shamsi Talab gave it the appearance of a floating piece. The part adjacent to Jahaz Mahal augments its beauty. The festival *phool walon ki sair* is celebrated here every year in the month of October. The President and the Prime Minister also participate in this fair.

Aulia Masjid (Mehrauli)

Near the village stands the Aulia masjid. In the marble courtyard *massalles* (place for devotees to sit and pray) built of sandstone are provided. It is said that the three great muslim Aulias (saints) namely Khwaja Moiuddin Chishti, Qutab Saheb and Baba Farid, had sat on these *massalles* for prayers and meditation. According to a tradition Muslims offered prayers at this mosque on their capture of Delhi.

Sultan Ghari's Tomb (Malikpur)

This is the tomb of Nasiruddin Mahmood Mori, the elder son of Iltutmish. Built of marble and red sandstone it is perhaps the oldest (1231-32) surviving tomb in Delhi. This tomb is known as 'Ghari' because the dead body of the prince was kept in the 'ghar' (a cave), instead of a casket or a bed as is customary among the Muslims. Close to it are the tombs of Ruqnudin Feroz and Muizuddin Bahram, two other brothers of Razia Sultan. The impact of Hindu architecture is very evident on these monuments.

Hauz Khas (Hauz Khas)

Hauz Khas (main pond) was built by Alau'd-din Khilji to serve as the main water supply for the capital city of Siri. It is said that the pond was so big that no one could swim across it. Timur Lang during his invasion of Delhi camped by the side of this reservior for a week.

Firoz Shah's Tomb (Hauz Khas)

It is a rubble-built plastered square chamber with high but slightly battered walls and a lofty dome. A string of red sandstone and marble and carved battlement decorate its exterior. The tomb is entered through a door on the south. The intrados and the ceiling of the dome and squinch pendentives are decorated with plaster-work including incised Quranic inscription of Naskh characters and paintings. The inscription over the southern doorway was engraved during Sikandar Lodi's reign, when he undertook some repairs to the tomb. The doorway spanned by a lintel and the stone-railings outside it are Indian features which have been mingled here with Islamic architecture. Among the four graves inside the chamber, the central one is believed to be that of Firoz Shah and the two others of his son and grandson.

Madarsa (Hauz Khas)

Contiguous with the tomb to its west and north, rise from the bank of the tank in two storeys a series of chambers. These were built by Firoz Shah in 1352 A.D. as a *madarsa* or college for religious training. At their northern extremity is a mosque. These buildings are on an L-shaped plan. With their latticed windows, medallions in stucco lotus-motifs, paintings on ceilings, balconied windows and deep niches, possibly for keeping books, these wings stand out unique in their class. The independent building in the south-western corner possibly served as the Principal's residence.

In 1398, after defeating Muhammad Tughluq, Timur encamped at the tank and his historian Sharfu'd-din was highly impressed by its large size. He, however, wrongly ascribed the construction of the tank to Firoz Shah Tughluq.

Dadi-Poti and other Tombs (Hauz Khas)

Two tombs built on an elevated ground, one larger and the other smaller have been identified as *Dadi-Poti* tomb. The tombs, built of rubble and plaster, follow the square pattern of Lodi tombs, with opening on the east, north and south and with the facades broken into semblance of 'storeys'. It is not known who lies buried in them. But the larger one is known as the tomb of *Biwi* (mistress) or *Dadi* (grandmother) and the smaller one that of *Bandi* (maid servant) or *Poti* (grand daughter).

The discovery of a medieval Sanskrit inscription, here suggests that the site was a Hindu establishment earlier.

Mubarak Shah's Tomb (Kotla Mubarakpur)

Mubarak Shah's tomb lies in Kotla Mubarakpur area. Originally it was enclosed by an octagonal compound wall with two opening gates on the south and the west. Only the southern gate and the mosque on the west are left now.

The main entrance to its octagonal chamber is from the south. There are arched openings on the other sides except the west, which is occupied by a *mihrab*. It is surrounded by a *verandah*, with three openings on each side. The corners are strengthened by slopping buttresses. Its broad low dome rises from a sixteen-sided battlemented drum with a turret on each corner and is crowned by a lantern. Over the roof in the middle of each side stands a *chhatri*. The ceiling of the dome is ornamented with incised and coloured bands of plaster, with a triple band of Quranic inscriptions at the springing of the dome.

With its wide proportions on the ground, low dome, buttresses and *chhatris*, the tomb looks a little stunted, but is a good example of octagonal Sayyid tombs, which retained their popularity in Lodi and even Mughal times.

Anangpur Dam (Anangpur)

Close to the village of Anangpur is a dam ascribed to Anangpal of the Tomar dynasty. It is built of local quartzite stone across the mouth of a narrow ravine. The vast lake presents an impressive sight during the rainy months. The sluice openings in the dam allowed the water to flow through the ravine and so irrigate the fields below.

In the neighbouring hills there are ruins of some fortifications. It lends support to the popular belief that Anangpur represents the site of a town founded by King Anangpal.

Nai-Ka-Kot (Adilabad)

This small fort in ruins, lies on a hillock to the east of Adilabad. It is built in the same manner as the fortresses described above, but on a different plan. Although known popularly as the fort of a barber (*nai*), or washerman or sweeper, it was probably built by Muhammad Bin Tughlaq as a private residence before he constructed Adilabad.

Sarai (Badarpur) PL-8

On the Mathura Road lies the Badarpur Sarai, perhaps built by Roshanuddaula. It is enclosed by rubble-built walls and comprises two enclosures separated by a central gateway. There are high arched gateways also on the north and south through which the main road passed earlier. Within the enclosure of Sarai is a mosque. On the spandrels of the arches inside is written in colour 'O Shah Bhik'. Sheik Bhik was the preceptor of Roshanuddaula.

Shikargah (Jhonti)

A two-storeyed structure made of small bricks, served as the hunting resort (*shikargah*) for emperor Shahjahan. On the ground floor there are three arched entrances, one of which has now been sealed. The monument has stairs on both sides. Built of lime and mortar it is supported by an arched beam made of small bricks. The roof is built of linter. There are two arches on two sides and a window in the middle. The window probably provided a clear picture of the hunting expedition. A little further from *Dam-khas* is the *pizza* and beyond it is *andheri*, a room probably some official's residence. The hunting ground covers an area of 50 *bighas* (10 acres). The boundary wall which is now in ruins was constructed by emperor Augangzeb.

Dargah Hazrat Sayyid Mahmud Bahhar (Kilokari)

This *dargah* is situated on the border of village Kilokari. It is considered to be a sanctified place. Hazrat Sayyid Mahmud who bore the title 'Bahhar' was a great saint and a learned person. He died in 1376 A.D. He is said to have revived a dead person and hence became known as *Muhayyul-Uzzam* (the saint who revives the dead) An annual *urs* is held here on 27th day of the month of *safar*.

Hazrat Nizamu'd-Din's Dargah (Nizamu'd-Din)

Sheikh Nizamu'd-Din was born at Budaun in 1236. He lost his father at the age of five and came to Delhi with his mother. Later he became the disciple of the famous saint Sheikh Farid Shakarganj, who appointed him as his successor. Both Allau'-Din Khilji (1296–1316) and Muhammad Tughlaq (1325-51) were devoted to him. He once prophesied that Ghiyashu'd-Din Tughlaq, who was then in Bengal, would never see Delhi again. The prophecy came true, as the Sultan died under a temporary structure some 6 kilometre south of Delhi.

Hazrat Nizamu'd-Din died in 1325. His original tomb does not exist now. The present structure was built in 1562 A.D. by Faridu'n Khan, a nobleman, but subsequently many people repaired it. The *dargah* is a square chamber surrounded by *verandahs*, which are pierced by arched opening, while its roof is surmounted by a dome springing from an octagonal drum. The dome is ornamented by vertical strips of black marble and is crowned by a lotus-cresting The area around the tomb was regarded as sacred and so a large number of persons, including those from the royalty, lie buried here. On the death anniversaries of Hazrat Nizamu'd-Din Auliya and Amir Khusro, a fair is held here.

Jama'd Khana Masjid (Nizamu'd-Din)

It lies to the west of Hazrat Nizamu'd-Din's tomb. Veneered with red sandstone consisting of three bays, each surmounted by a low dome, the central one higher, its arches are fringed with the 'lotus-bud' decoration. The mosque was built in A.D. 1325 by Khazr Khan, son of Allau'd-Din Khilji and is the oldest building in this area.

Baoli (Nizamu'd-Din)

Near the northern gate of the enclosure of the *dargah* is a large *baoli* (stepped well) which is considered sacred. It is said that the *baoli* was under construction when Ghiyasu'd-Din Tughluq was building Tughlaqabad. Ghiyashu'd-Din prohibited workmen to work elsewhere. But the workers worked for the saint at night. It is said that when the emperor forbade the sale of oil to them, so that they may not work in the dark, they used the water of the *baoli* for oil, and it served the purpose equally well.

Chini-Ka-Burj (Nizamu'd-Din)

The mosque called *Chini-ka-Burj* lies adjacent to *baoli*. It comprises three compartments, each with an arched opening. The building was apparently built during the Lodi times. The wide use of coloured tiles in the interior of its upper chamber has brought it the name 'tower of tiles'.

Jahanara's Tomb (Nizamu'd-Din)

To the south of Shaikh's tomb is an unroofed enclosure, with perforated marble screens, containing the grave of Jahanara, Shah Jahan's elder daughter. The hollow receptacle on the grave is filled with grass in accordance with her last wish. The inscription on the grave reads 'Let naught cover my grave save the green grass; for grass well suffices as a covering for the grave of the lowly'. The tomb of Muhmmad Shah (1719-48) also lies within a small enclosure similar to Jahanara's tomb. Mirza Jahangir, the eldest son of Abkar II (1806-37), also lies buried in an enclosure here. South of this is Amir Khusro's tomb.

Kali-Or-Kilan-Masjid (Nizamu'd-Din)

Kali-or-Kalan-Masjid, built by Khan-i-Jahan Junan Shah, prime minister of Firoz Shah Tughlaq lies on the eastern periphery of the village of Nizamu'd-Din. Built of rubble stone. it is a big structure. Originally its courtyard was partly covered.

Khan-i-Jahan Tilangani's Tomb (Nizamu'd-Din)

The tomb of Khan-i-Jahan Tilangani, the prime minister or Firoz Shah Tughlaq stands on the north-western corner of the village. It consists of a central octagonal chamber enclosed by a verandah and is covered by a dome. Its sides are pierced by three arched openings. Being the first octagonal tomb in Delhi, architecturally it occupies an important place in the development of tomb architecture.

Taka (Ataka) Khan's Tomb (Nizamu'd-Din)

It is built of red sandstone within a walled enclosure on the northern periphery of the village. On its four sides there are deeply recessed arches with openings and its red sandstone facing is thickly inlaid with marble and coloured tiles. Its interior

was ornamented with painted plaster, which has now largely come off. Coloured tiles are also fixed on the western wall of its enclosure containing recessed arches. Although small in size, it is a fine piece of architecture.

Taka Khan was the husband of Ji Ji Anga, a wet nurse of Akbar and held important positions in the court.

Ghalib's Tomb (Nizamu'd-Din)

Outside the Chausath-Khamba to the north lies the grave of the famous poet, Mirza Ghalib. The grave was covered subsequently with a small marble structure and a compound wall.

Bara-Khamba (Nizamu'd-Din)

North of the village stands a large square structure consisting of a central chamber with three arches on each side and supported on twelve sets of pillars. A *verandah* runs around the central chamber. Originally it appears to have been a tomb.

Lal Mahal (Nizamu'd-Din)

Chausath-Khamba, a red sandstone building is known as *Lal Mahal* or 'Red Palace'. It has a central domed room, with *verandah* on all the sides. The *verandahs* have a flat roof supported on pillars and lintels.

It is identified sometimes with 'Kushk-I-Chaman' built by Ghiyashu'd-Din Balban (1266-86).

Khan--i-Khanan's Tomb (Nizamu'd-Din)

The tomb of 'Abdu'r-Rahim 'Khan-i-Khanan' lies opposite Nizamu'd-Din. It is a massive structure rising from a high platform faced by arched bells. Double-storeyed, with a high deeply recessed central arch on each side and several shallow arches on the flanks in each storey, it follows the pattern of Humayun's tomb. The interior of the tomb is decorated with incised and painted plaster. The with beautiful designs, specially on the ceiling are captivating. Around the central double dome are disposed *chhatris* at the corners and *dalans* (open hall) in the middle of the sides. The red sandstone, marble and other stones of this tomb were later removed and used in Safdar-Jang's tomb.

Hastsal Minar (Hastsal) Pl-9

A three storeyed brick-built tapering minar, 17 metres high, faced with red stone, with a narrow staircase leading to its top exists in village Hastsal. It rises from a two-tiered platform, the lower one square and the upper one octagonal. The lower half of its first storey is twelve sided, the remaining height being provided alternately with angular and semi circular flutings.

Hathi Khana (Hastsal)

To the north-west of *minar* there are remains of a double-storeyed pavilion called *Hathi Khana* (elephant stable). It is believed that Shah Jahan built the pavilion as a hunting lodge. The *minar* may have been used by him as a shooting tower.

Shalimar Garden (Haiderpur) Pl-10

Shalimar Garden lies about 800 metres east of the village Haiderpur. The garden was also known as Aizzabad Bagh. It was perhaps built by Shah Jahan and named after his mistress 'Aizzu'n-Nissa Begum. It has been mentioned by European travellers Bernier and Catrou. In the garden there is the palace Sheesh Mahal built by emperor Shah Jahan as a holiday resort. Built of small bricks and lime mortar it is raised on a 2 metre high platform. At the back there is a big covered *varandah.* The central hall has a dome shaped roof The arches are made of small bricks and in the foreground stand red sand stone columns. Rooms are provided on both sides of the structure. It is said that Aurangzeb while chasing Dara Shikoh stayed here briefly. He declared himself the emperor of India and put on the royal crown here on 31st July, 1658. The British Residents used this palace as a country house.

Mosque (Wazirabad)

About one kilometre south of the village lie some rubble built monuments, erected by Firuz Shah Tughluq (1351-88). The principal monument is a mosque, with its two-bay deep prayer-chamber pierced by five arches. The rear bay is surmounted by three domes, while a small chamber supported on pillars and screened with perforated slabs has been raised as an intermediate storey for the use of ladies.

In the centre of courtyard of the mosque is a square tomb, said to be of saint Shah Alam, a contemporary of Firuz Tughlaq. Its domed roof rests on twelve pillars and its sides were originally closed by perforated screens, some of them still surviving.

Mahal (Mahipalpur)PL-11

Within the village Mahipalpur lies a two-aisle deep stone built hall, with three arched openings, with a room at either end. Its roof is enclosed with stone railings, characteristic of Firuz Shah's architecture Commonly known as the *mahal* (palace) it was possibly built as a hunting lodge by Firuz Shah.

Bund (Mahipalpur) PL-12

To the south-east of the village is a large bund of rubble-masonry, believed to have been constructed by Firuz Shah Tughlaq as part of his irrigation schemes.

Palam Mosque (Palam)

A small brick-built mosque, with three arched openings in its prayer-hall, and with small domed minarets on the four corners of its roof, lies at the south-east corner

of the Palam village. According to an inscription on the northern arch of its central compartment, it was built by Ghazanfar in 1528 A.D. during the reign of Babar (1526-30). It is thus the only surviving structure of Babar's reign in Delhi and one of the few of his period in India.

Moth-Masjid (Masjid Moth)

It was built by Miyan Bhuwa, a minister of Sikandar Lodi who also served Ibrahim Lodi. The mosque is built on a raised platform enclosed by walls, with an elegant red sandstone gate on the east. Its prayer-chamber, veneered with grey ashlar stone, is pierced by five arched openings-the central one built with red sandstone and ornamented with marble, has a small window above the arch The central *mihrab* in the prayer-chamber is ornamented with Quranic inscriptions in Naskh characters and the ceilings of the end bays with incised plaster. The roof is crowned by three domes rising from the centre and-end bays. The rear corners are provided with double-storeyed towers with arched opening and to match with them the eastern corners of the compound wall are provided with domed octagonal *chhatris*. Other features of the building that draw attention are stalactite pendentives supporting the dome and coloured tile work, which exists now only in traces.

This mosque portrays a significant stage in the evolution of the Mughal architecture. Ornamentation of the *mihrab* or arches, special treatment of the central arch and construction of three domes over the prayer-chamber are typical Mughal characteristics

It is said that once Sikandar Lodi picked up a grain of *moth* (a kind of lentil) from a mosque and handed it over to his minister Miyan Bhuwa. The later sowed it and multiplied the harvest again and again till sufficient money was earned to build this mosque.

Tomb of Sultan Bahlol Lodi (Bhadaoli)

Bahlol Lodi died in village Bhadaoli near Saket in 1488 A.D. and was buried near the *dargah* of Roshan Chiragh-i-Dilli. The tomb was built by his son Sultan Sikandar Lodi. It is a square building having three arches on either side and four cupolas around the dome.

Panj Bourja (Zamurradpur)

Originally it was called Kanchan-Sarai. It seems to have been conferred upon Zamurrad Khan by Sultan Behlol Lodi and hence the name Zamurradpur Here lies the grave of Zamurrad Khan. The tomb stones are provided with pillared *chhatries*. Architecturally the building belongs to Lodi period.

Tomb of Langar Khan (Raipur)

This tomb is situated in village Raipur near Zamurradpur. Langar Khan was a noble of Behlol Lodi. An ordinary building of stone and lime-mortar, it seems

to have been built in about 1494 A.D. The special feature of this tomb is that its tomb stone is so high that a man cannot stand to its full height.

Tomb of Sultan Sikandar Lodi (Khairpur)

The tomb of Sultan Sikandar Lodi is situated near village Khairpur (presently Lodi Garden). It was built by his son Sultan Ibrahim Lodi in 1517 A.D. Built of stone and limemortar, the interior, the *verandah* around the central hall and the *chhatris* on the super structure have all been nicely worked.

Masjid Khairpur (Khairpur)

It was probably built during the reign of Sher Shah. Built of stone and mortar, it exhibits a refined style. It has an extremely beautiful scheme of stucco ornament. Quranic verses have been carved on the facade. This is a rare specimen of the fine architecture of Pathan period.

The tomb here contains the mortal remains of a Pathan noble and the locality has derived its name from the same source.

Samadhi of Sant Haridas (Jharoda)

Sant Haridas lived in Jharoda village during the times of Akbar the Great. He lived a saintly life and was endowed with many supernatural powers. A two storeyed temple stands at the place where he performed self-immolation. The interior of the temple is inlaid with marble. According to the wishes of the saint, only his footmarks are worshipped by the devotees. In the courtyard of the small brick house where the Saint was born there is a 2 square metre platform. The Saint used to sit in meditation there. The sandals of wood used by him are still preserved in the temple.

There is a deep pond at this site known as Mallah pond. It is considered sacred to dig the earth at this pond. Devotees dig up earth and slush from this pond. Its water is held as pure as that of the Ganga.

Coronation Pillar (Burari) Pl. 13

In the year 1911 King George the Fifth celebrated his coronation as the Emperor of India in Delhi. The rostrum built for the purpose still stands. It is built of red sandstone and is 30 square metres in size. There are 30 steps on each side which lead up to the rostrum. On the top of it there is a square quadrangular column. At the bottom of the column two metal plates bear the Declaration of Coronation in English and in Urdu. The English version runs as follows:

'Here on the 12th day of December, 1911, His imperial Majesty King George V Emperor of India accompanied by the Queen Empress in Solemn Darbar announced in person to the Governor, Princes and People of India His Coronation celebrations in

English on the 22nd day of June, 1911 and received from them their dutiful homage and allegiance.'

Najaf Khan Palace (Najafgarh)

Najafgarh was founded by Mirza Najaf Khan, the Prime Minister of Emperor Shah Alam (1772 to 1782 A.D.). The building which now houses the Najafgarh police station was his palace. His court was held in the building which now holds the government rest house.

Delhi Gate (Najafgarh)

Originally, Najafgarh had four main gates viz. Bahadur Shah Gate, Chhawla Gate, Dichau Gate and Delhi Gate. Of these, the first three were demolished when the roads were widened. The Delhi Gate, however, stands in its pristine glory. A stone plaque fixed on it by the British says: 'From the hills of Najafgarh, Isapur and Palam, 1005 men went to the World War of 1914-19. Of these 159 lost their lives. During the First War of Indian Independence in 1857, native soldiers gave a tough battle to the Britishers out side this gate.

Jawahar Chowk (Najafgarh)

On 25th August, 1857 Nicholson's army reached Najafgarh from Punjab for the crucial assault on Delhi. He killed 800 Indian soldiers in the battle of Najafgarh and captured the place. The five important citizens of Najafgarh who gave shelter to freedom fighters were hanged to death from the *neem* tree in Ateran Barar. To pay homage to these martyrs a platform was built at this place in 1957 as part of centenary celebrations of the country's Independence. The foundation stone of this platform was laid by U.N. Dhebar, the then President of Indian National Congress. The place where this platform was constructed was named Jawhar Chowk.

At Jawahar Chowk, the two *neem* trees are reminders of the supreme sacrifice made by the valiant freedom fighters.

Peepal Trees (Kakrola)

On 25 August, 1857 the British army had entrenched itself behind the high ground of Sarai Nangli. To neutralise the Indian opposition the British mounted guns on the two tall *peepal* trees in the vicinity. These guns played havoc on Najafgarh. 800 Indians lost their lives in the Najafgarh encounter with the British.

Ranaji's Samadhi (Kakrola)

Ranaji was a holyman who lived at Kakrola. He was endowed with super natural powers. After his death a *samadhi* was built by his devotees here. There are also *samadhis* of his disciples around.

Buddhaji's Samadhi (Dhansa)

The famous shrine of Buddhaji stretches over an area of 25 square metres. A corridor encircles the shrine on all sides. The *samadhi* is built in the centre of the shrine opposite which a marble statue of the saint is installed. The statue of Buddhaji once got damaged and a portion of the beard broke down. This piece was housed separately and is known as *choti samadhi*. Subsequently, a new statue of the Baba was consecrated in this temple.

Buddha Baba is a widely respected saint in the surrounding villages. A fair is held at the shrine every year on the second day of the month of Bhadra (Bhadon). Those whose wishes are fulfilled, distribute sweets and offer a thick sweet loaf (Teekra) to Baba. A mini fair is also held on the second day of every month.

Attached to the *samadhi* is the 'Gharoi Pond'. Legend says that it was named after Ghatotakacha (locally pronounced as Gharokha), son of the Pandava prince, Bhima. On the day of the fair, piligrims dig out clay from this pond. Around the pond, there are a number of *samadhis*.

Tank (Narela)

Close to the Narela village, there is an old tank laid with small bricks. This tank originally extended into an area of 84 *bighas* and was built by Raja Chand, the father-in-law of the famous Raja Bhoj.

This tank is still in use and has stairs on all four sides. It is 10 metres deep and slushy. The place where the cattle take water is known as *Gau Ghat*.

Legend has it that this tank always remained full to the brim during the times of Raja Chand. Once the people of the village saw a female hand, with bangles on, rising from the water. Foolishly villager hit the hand with an arrow and it slowly dropped down into the water, never to be seen again. Thereafter the tank was never as full as before. According to another legend, the tank was built during the twelve years of Bhoj's exile at Narela.

Sabha Chand (Narela)

A little away from the tank, near the Gandhi Ashram, lies the place where Raja Chand used to hold his court. This place is called 'Sabha Chand'.

Mansa Devi Temple (Narela)

To the east of Narela on the G.T. Road (now Sher Shah Suri Marg) stands the famous temple of goddess Mansa. Two big fairs, one on the sixth day of the month of *Chaitra*, and the other in the month of *Ashvina*, are held here every year.

Pucca Bagh (Narela)

This garden dates back to the times of Raja Chand. It used to be large in size, extending from the Mansa Devi temple to the Narela village. It is said to have existed till 1930. A part of its boundary wall can still be seen near the Gandhi Ashram, situated on the other side of the tank.

Gandhi Ashram (Narela)

Gandhi Ashram, Narela, was inaugurated by Mahatma Gandhi in the year 19[illegible]0. Hundreds of patriots vowed to lay down their lives for freedom here. Great freedom fighters like Krishna Nair and Swami Swaroopanand were initially associated with this Ashram.

Dada Malde Temple (Nangal Thakran)

The earliest settlers of Nangal Thakran had migrated from Nanukher (near Mehrauli) around the year 1170 A.D. Dada Malde, a saintly person had also settled here. The temple stands at the site of his house. This small temple, built on a mound is surrounded by a 5 metre high boundary wall. The main entrance is on the east. The other entrance is from the south. A marble statue of Dada Malde with short hair and a long flowing beard is installed in the temple. With wooden sandals in one hand and *Kamandal* in the other, he is represented in meditation (*samadhi*). On the sixth day after the *Amavasya*, the devotees come to the temple to seek a boon and offer *laddoos*. In the month of *Bhadra* a big festival is held here. Wrestling competitions are held and winners are awarded *pugrees* and cash prizes. The pond which surrounds the temple on three sides is said to be of legendary origins. People believe that it existed even during the *Treta Yuga*.

Dada Dev's Temple (Palam)

When Sind and its adjoining areas were subjugated by the Muslims, some Solanki Rajputs of Rajasthan migrated to Delhi. They brought with them stone slab of the revered temple of Dada Dev from their original home. It is said that this slab fell down at a place near Palam. Considering the spot as pious and worthy of God's abode, they built a temple of the deity there and settled around the place. The deity is revered by Hindus and Muslims alike. There is a small but very deep pond near the temple. A bath in the pond is believed to be a cure for ailments like eczema, skin rash etc.

Karan Singh's Samadhi (Palam)

This samadhi is popularly known as *chhatri*. The story goes that at one time there was a long feud between the Solankis of Palam and Gujars of the adjoining villages. In this feud one Chaudhary Karan Singh Solanki was slain by the Gujars. The Solankis took their revenge and succeeded in recovering the head of their slain leader. The *samadhi* was built as mark of honour to Karan Singh.

The Fort (Palam)

The Palam Fort is said to have been built by Chaudhary Karan Singh, the leader of the Solankis of Palam around 1857, as a safeguard against the Gujars who were after his life. Much of the Fort is now destroyed, but the walls are visible at some places.

Gurudwara Hargovind Sarovar (Nangli)

Gurudwara Hargovind Sarovar is considered sacred by the Sikhs. It is said that the *Guru* had stayed here overnight while on his way from Amritsar to Delhi to meet the Mughal Emperor, Jahangir. *Sant* Buddhaji who was sent to find out the whereabouts of the *Guru*, who had been imprisoned in the Gwalior Fort by the Emperor, also stayed here. Adjoining to Gurudwara there is a *sarover*. Close to it is the *samadhi* of Pir Bhure Khan.

Buddho Mata Ka Mandir (Nangli)

The temple is built on a five layered pedestal. The deity is installed in the centre. Every year on the 7th day after Holi festival (called 'Seeti Saatam') a big fair is held here. Once a potter is said to have taken away the idol of Buddho Mata to Rana Pratap Bagh. Ever since, a fair is also held there annually.

Shiva Temple (Barwala)

The village Barwala was founded during the reign of Emperor Shahjahan when some families from Pooth Khurd came and settled here. A *Shiva* temple was built in the village about 250 years ago.

Boorha Baba Ka Johar (Boorhapur)

Boorhapur literally means the village of the old. Every year on the second day of the month *Bhadra*, a *Boorhu Mela* (fair of the old) is held here. Wrestling competitions are the main attractions of the fair.

The ancient pond of the village known as *Boorha Baba Ka Johar* (pond of the old man) is the venue of the fair.

Badli Sarai (Badli)

Badli Sarai was built by Sher Shah Suri as a rest house for the armies proceeding on expedition towards Punjab. The *Sarai*, quadrangular in shape, is built on a 2 metre high platform. It is made of small bricks and lime mortar. The *Sarai* is 70 square metre in area.

Two of its gates are still intact. Each gate is 4 metre wide and 10 metre high. The carvings on the plaster denote exquisite artistry. Stairs have been provided on both the sides of the structure. The roof is so strong that even today it looks like new. Prince Salim is said to have always rested here when on way to Punjab. This *Sarai* is also known as *Chhabili Bhatiari Sarai*.

Gol Chabootra (Badli)

Near the *Sarai* there is a circular stone platform three metres in height. It is also believed to have been built by Sher Shah Suri. Legend has it that drums were kept on this platform to warn the army against any invasion.

Memorial (Badli)

The tower was erected during the uprising of 1857 by the British to commemorate the dead of 75th Regiment. It bears the following inscription:-

To the memory of

Those Men of H.M. 75th Regiment

(now Ist Battalion Gordon Highlanders)

Who fell while charging the Mutineers, Guns on the mound at the battle of Badli Ki Sarai 8th June, 1857.

To whose gallantry the Victory of that day was due and who lied buried here.

Instead of lamentations they shall have

Remembrance and instead of Pity, Praise.

Near the tower there is a Christian Cemetry. The British who fell during the battle of Badli Ki Sarai were buried here.

Gangnath Maharaj Ki Samadhi (Munirka)

Gangnath Maharaj was a man of supernatural powers. His devotees built a *samadhi* and a temple in his honour. On the Janmashtnmi day every year, a big fair is held here. Wrestling bouts are the main attraction of the fair. Offerings are made at the *samadhi*. It is a popular belief among the villagers that any work begun with the blessings of Gangnath Maharaj will always be successful.

Near the temple is a pond, which is known as *Babaji-wala Johad* (Babaji's pond). The pond is covered on theer sides by high clay walls, about 20 feet high and on the fourth side there is a *ghat* which has 20 steps. There is a *Shiva* Temple and a *dharamshala* at the top of the *ghat*.

Guru Ghantal Mandir (Rani Khera)

The forefathers of the inhabitants of Rani Khera are said to have migrated from Sambhal. Their *guru*, who was a great saint also came with them. On his death the people built a *samadhi* in his honour which is popularly known as *Guru Ghantal Samadhi*.

On the ninth day of lighted fortnight, a fair is held here. Villagers from the 15 villages of the Dabas region participate in this fair. Many parents also come for the tonsure ceremony of their children.

Maharaja Suraj Mal Ki Samadhi (Karkari)

The *samadhi* of Maharaja Suraj Mal lies near the Karkari village. Built on a platform which is 1 metre high, 4 metres wide and 4 metres long, it is made of shining lime plaster. On its northern side is a plague which reads:

'Here lies the great king, the brave of the braves, the Lord of Bharatpur who breathed his last on the 12th day of *Pausa*, 1820).'

This is a general account of the important monuments scattered in and around the villages of Delhi. May be there are many more such monuments lying burried or unidentified in the villages. Delhi Archaeololgy Department will perhaps unearth some of these hidden treasures

Conclusion : Receding Rural Delhi

This Gazetteer is on the rural part of the Union Territory of Delhi. That part of the Territory is but the shadow of unquestionably the most unique city of this great land of ours, whose cultural evolution extends back into antiquity. The Gazetteer contains an abundance of information about the life and living of a rural people, whose distinctive character derives from the fact of their proximity to this city which had often acted as the torch-bearer on the course of that cultural evolution. A clear perception of the past and present role of the city necessarily forms the background for the appreciation of the state of the people whose ruralness is rapidly vanishing.

Delhi's signal importance has rested throughout its long history on its strategic location. All along, it has functioned as an easily accessible entry point into the rich and fertile plains of the Gangetic valley for those who streamed into India from the north-west. The vast expanse of that valley reaching out to the Bay of Bengal is walled up by the mighty Himalayas in the north and by the sprawling Vindhyas in the south. In the west, the Aravallis come up almost from the Arabian Sea in the south-west to meet the foothills of Himalayas in the Doon Valley but before reaching that valley they flatten out on the banks of the Yamuna, thereby creating an ideal location for the siting of that entry point. Located on the funnel joining the Gangetic and the Indus Valleys, Delhi is one of the busiest conjunction on the arterial Grant Trunck Road that covers a distance of 2000 Km from Yamuna, across Punjab, Haryana, Uttar Pradesh, North Bihar and West Bengal, to Calcutta.

Its glory goes back to the early part of the second millennium B.C., when the Pandavas made it, as Indraprastha, their capital. Today, as New Delhi it is the capital of a populous democratic republic. Many a time in between, it rose and fell as the august seat of a succession of imperial regimes wollowing each time in grandeur for a spell and then sinking deep into degrading oblivion. There is indeed no other city anywhere in the world that has played the role of an imperial seat for as many times and for as long a period altogether as Delhi has. Even when it was not the seat of an imperial power, Delhi had enjoyed strategic importance in the vast heartland of the Indian sub-continent. Delhi's history has all along been central to the history of pan-Indian civilisation whose sway extended at times from Central Asia in the north-west to Indonesia in the south-east.

Today, at the culmination of that history, Delhi represents a concentration of people and their multifarious activities on a scale much larger than ever before in that long history. It is the capital of the world's second most populous nation. It is one of the world's most important centres of international, political, economic and cultural intercourse. It is the busiest node of the country, serving specially its northern

half. Through road, rail and telecommunications, it reaches out to the remotest corners of our vast territorial extent. It is the hub of national politics and administration, of industry, trade and commerce, of higher education, culture and sports. It is fast acquiring a cosmopolitan character drawing in people from all parts of the country and from all over the world in its deplomatic life. It is *par excellence* a large and expanding multifunctional metropolis of the world.

The Gazetteer deals with the contemporary aspects of the proximity of this great city in their historical context. Its inevitable concern is with the state of a people who differ greatly on that account, from the rural masses anywhere else in the country. These people have survived all the vicissitudes of the rise and fall of successions of imperial regimes. In the process, they seem to have preserved their undaunted spirit and robust horse sense, their customs and traditions and their ways of living; they have had to constantly adapt themselves to the succession of far-reaching changes in their immediate setting. They probably profited from the rise of each successive regime and suffered from its decline and displacement.

Now at the coming dawn of the 21st century, they are on the verge of losing their rural character altogether. The time seems to have arrived for them to be lost into the swelling mainstream of the life of an exploding metropolis. Thev are undergoing in some respects an unpalatable and perhaps even a painful process of being rapidly drawn into the fold of a sprawling sophistication of the enlarging population of an insolent metropolitan capital of a land that is rapidly increasing its numerical strength.

This rural part of the Union Territory of Delhi has shruck greatly during the last three decades in terms of both area and its share of the Territory's population. In 1912 when Delhi became the capital of British India, the rural portion of the newly constituted Delhi district accounted for as much as 44 per cent of that district's population. This share was reduced to around 20 per cent in 1947 when the country became independent. The decrease in the share has continued and today it is only about 7 per cent. In absolute terms, however, the rural population of the Territory had increased from 0.30 million in 1951 to 0.45 million in 1981. A part of this increase can be attributed to the overflow of the growth of the areally expanding metropolis into the shrinking juristiction of rural Delhi. Notably that shrinking rural area forms a part of the Delhi Metropolitan Corporation which shares within the Territory the local government functions with Delhi Municipal Committee and the Delhi Cantonment. In other words, the rural part of the Territory is served by a local body essentially urban in form and character.

The imminent elimination of the rural nature from within the Union Territory of Delhi enhances the importance of the present gazetteer as a repository of historical information about, and as an appraisal of, the current trends in the life of a people who may continue to lead their rural ways of living if they can not change them but only

within the mainstream of a cosmopolitan population of mammoth size. The Gazetteer gives a detailed account of the varied dimensions of the changing social, economic, cultural and environmental conditions of the life of these people. It deals with the benefits they may derive and the disadvantages they may suffer from momentous changes in their surroundings over which they have entirely no control.

The Gazetteer deals with the state of these people, their natural setting, the role they played in the country's struggle for independence, the means of their livelihood including agriculture, industry and trade, the varied occupations they pursue in that regard, economic trends impinging on their life, the development of economic services of commerce, transport and communications and of social services of health, medical care, education and social welfare and the administration of revenue, law and order, local self-government, cooperation and the panchayats. It further reflects upon the importance of several places of historical importance in their midst. All these topics are discussed as noted earlier, in their historical context and particular attention is focussed in each case on the impact of the recent trends in urbanisation on the condition of the poople. It will help to appreciate how important is the locational factor (of proximity to the capital) in the shaping and reshaping of the life of the rural communities involved.

In this chapter we recapitulate the most recent events in this long history, whose impact on the rural life of the Union Territory is far reaching, profound and disturbing in several aspects. The gobbling up of rural communities by the expansion of urban Delhi began with its becoming the capital of British India in 1912. The imperial *darbar* in the preceding year was held away from the main city of Shahjehanabad, the present old Delhi city, in the north where the Coronation Pillar stands today. It was then in the midst of rural areas in the northern part of the territory. It was at this *darbar* that Delhi was proclaimed as the new capital in the place of Calcutta. A hectic period of the construction of the temporary seat of the government of British India followed. The rural character of the vast area in the north of the outer walls of Shahjehanabad was suddenly transformed in a new city called the civil lines where the Delhi University is located today. Several villages had to be shifted away from the scene of this hectic activity. Most of them could not be absorbed to take up the new urban functions and there was a fundamental change in the pursuit of their forming activities. For them it meant a grievous dislocation of their rural existence.

Then followed the search for the site on which the imperium could display its might and grandeur. The vast stretch of rural land around the Coronation Pillar was not found suitable for the purpose because of it being prone to malaria on account of the marshy state into which it slipped almost every year from the monsoon overflows of the Yamuna. Ultimately the choice fell on the undulating landscape just south of the congested Shahjehanabad centred on the Raisina village. In all, there were six villages on the site demarcated for New Delhi, the new capital of British India.

All these villages were displaced and some of them came into the old city and its vicinity to further congest them. In effect, this was the beginning of the acquisition by Delhi-New Delhi matropolitan settlement of powerful magnetism that has been increasing its potential force of attraction ever since then. The process of accomodating the perennial inflow of people so set up amounted to the sprawling of the metropolis over the surrounding rural areas on all its sides overcoming apparent obstructions represented by the substantial stretch of ridges on the west and of the flood prone Yamuna in the east. Attempts to bring some sort of order in the sprawling phenomenon through planning were strictly confined to the development of the capital and its Cantonment. For the rest the matter was left to a powerless and, therefore, innocuous Improvement Trust. Beyond the combined jurisdiction of the New Delhi Municipal Committee and the Cantonment Board, the metropolis spread its tentacles all around into rural area decimating villages and distroying their occupations. The only benefit that it may be said to have bestowed upon the areas of its expanding outreach is the rapid inflation of the prices for their lands. But in actual practice it was an entirely dubious advantage for the rural folk involved, the benefit accrued only to unscrupulous speculative intermediaries, land developers and builders. Money that came into the hands of the rural people tended to evaporate in pursuit of their new access to the growing ways channels of conspicuous consumption. The drastic change in their life and livelihood proved to be traumatic and they were left to hibernate in the same village *abadis* that the sourrounding spread of the city had rendered into virtual slums.

The process continued after Independence during the period of the preparation and execution of the Delhi Master Plan, which was conceptualised in Delhi's regional setting. Accordingly the Master Plan was prepared for the Delhi metropolitan area forming the core of what has been designated as the National Capital Region spread beyond the Delhi Territory over the contiguous regions of Haryana, Rajasthan and U.P. The hypothesis underlying this conceptional framework was that the Delhi metropolis could avoid further congestion by developing a series of ring towns within the National Capital Region as counter-magnets. The experience gained in the execution of the Plan, however, suggests that the said hypothesis has not been viable. Some of the ring towns have rapidly grown in population but without making any dent on the magnetism of Delhi. Delhi's population has continued to grow at an accelerating pace unanticipated in the original version of the Master Plan.

The Plan did influence the course of development within the Union Territory. The River Front has been developed thanks mainly to the *Samadhis* of the departed leaders. The metropolitan circulation pattern has been improved and several district centres, humming with commercial activities have been built up. New Delhi and South Delhi have acquired new skylines dominated by multi-storied commercial and residential complexes. Further several overbridges, five star hotels and guest houses, and sports stadia, not envisaged in the Plan, came up in a short time for the holding of the 1982 Asiad. Beyond this, the metropolis has kept on sprawling all around beyond

the river and the ridge to envelop rural areas together with their village *abadis*. Nobody claims that the expansion of the metropolis is occurring according to any preconceived plan or design.

The rapidity with which the expansion is taking place to accommodate unabated population growth and the intensification of the existing and addition of newer functions of the metropolis has resulted in an accumulation of diverse problems of life and living in the metropolitan setting. The enforced expansion of basic amenities and services is falling short of requirements. The construction activity despite its accelerating tempo is becoming increasingly inadequate. Congestion on roads, in offices and in residences is reaching the limits of intolerance. Slums are multiplying and pavement dewelling is rapidly spreading all over. All these have created a process of constantly reconsidering the working of the Master Plan, implying thereby that the Master Plan is but a make-shift plan.

Our concern here is with the impact of this unending string of developments within the sprawling metropolis on the rural areas of the Union Territory. They could not avoid being affected. The impact on them has been positive in part and negative in a larger part. It is a mixed bag of some advantages and many disadvantages. A sizable part of rural Delhi has been, as mentioned earlier, swallowed up by the metropolitan expansion Their rural character has been almost entirely lost in physical terms. The remaining part has experienced changes that are no less far-reaching. Its economy has significantly changed; its occupational profile is now strikingly different. The pressure of population on their limited accommodation has intensified. Their ways of living are changing fast in responses to influences generated by the metropolitan expansion. In any case, they form a part of a mammoth municipal corporation. It is difficult to say what the rural inhabitants whether physically absorbed by the metropolis or not, have gained and what they have lost. That they have been at the receiving end is, however, quite apparent.

Those of them that have been encircled by metropolitan expansion are the so-called urbanised villages. Their number which was only 6 at the time the Raisina area began developing as New Delhi increased over time to 162 in 1981, while those beyond the expanded metropolitan limit and, therefore, not so absorbed were 214 in all. Of the former set of 162 villages, as many as 115 became urbanised villages in the course of the last 30 years or so, apparently on account of the implementation of the Master Plan. The state in which they are hibernating today has depended on the provision made in the strategy of implementing the Master Plan for their systematic development as parts of the metropolis.

No such provision was apparently made in the working out of the Master Plan at the ground level. As village after village came to be engulfed by the expansion of the metropolitan settlement, they were left to fend for themselves as best as they could,

beyond the extension of rudimentary civic amenities. Their internal structure was left untouched. These village *abadis* got increasingly congested not only from the natural growth of the population but more importantly also from the incoming particularly of the migrant families and groups of individuals in search of dormitories to live in.

These village people lost their traditional agricultural and allied occupations and they could seek no employment avenues that the expanding metropolis provided. In this new expansion of the city's economy, they did not fit in squarely as they had neither the general nor any kind of vocational education or training. They could, therefore, only swell the ranks of footloose unskilled labour. Some of them were probably lucky in getting unskilled jobs in the great variety of industrial, commercial and service establishments but most were pushed into the so-called informal sector to scratch uncertain livelihood. There was a disintegration of their well-knit *abadis* and their social fabric was shattered. The internal structure of the *abadis* has hardly changed and it has got heavily congested. The already unhealthy ecology of these *abadis* further worsened and each of them was transformed into a varitable slum within the metropolitan settlement.

Perhaps the only benefit was the appreciation of their land in value which now was put to urban uses. The appreciation of land values within and around the *abadis* was indeed tremendous. But they were not in a position to take advantage of it in order to consolidate their economic position. Barring a few who had the wit to survive and even prosper, most of the people of these urbanised villages fell prey to speculative private developers who cheated them out of the increasing prices of their real estate Even so, some of them get more money in their hands than they had ever seen before; they were left to indulge in conspicuous consumption and thereby fritter away their newly found financial liquidity. The attraction of the many vices that metropolitan life had created for them was irresistible and most, if not all, of these absorbed villages sank deep under the tide of metropolitan expansion. They had no time to adjust to the impersonal, unrelenting and unscrupulous ways of metropolitan life that had engulfed them.

The social, psychological and economic consequences of the new surroundings they found themselves in have been profound but there has been no authority or agency to redress their grievances. The transition from unhealthy but still open rural settlement to a veritable slum enclosed by the city is not what they had bargained for. It is at times suggested that over time, their conditions would improve but experience shows that this is a futile hope; for, we have many examples extending from Chandrawal in the north to Kotla Mubarakpur in the South still steeped deep into acute slumminess after a lapse of a long enough duration since their enclosure by the city. Most often, such unintegrated villages within the city come to shelter urban crime, vice and anti-social activities.

The metropolitanised villages left to themselves do not acquire the capacity to take advantage of the positive opportunities that the expanding city creates for upward social and economic mobility. Their very existence over a period of time makes it difficult for civic planners and authorities to weave them into the pattern of more or less planned use of the surrounding lands. Their relocation is rendered much too difficult; they may at best get some benefit of palliatives in the form of a minimum of the requisite civic amenities.

The unengulfed rural areas may be said to fare a shade better in comparison. This continuing rural parts of the Territory, enjoying the jurisdiction of the Metropolitan Corporation, did witness many more meaningful changes in their surroundings. Most important of these changes are brought in by the improvement in the roads linking them with each other and with the city. Likewise communication channels have been greatly expanded with their electrification. Also their access to social services, including education, health and family welfare, has greatly improved. Their contact with the city through commutation for work, business and entertainment have been on the whole, beneficial. Yet, it is also true that access, to these rural communities, of the migrants coming into the city too has been greatly facilitated thereby, and so they have acquired within them an uneasy presence of strangers who commute to the city for work.

The proximity of the expanding metropolitan market, with insatiable demand for daily necessities, has no doubt exercised a profound impact on the economy of rural Delhi. Apart from receiving income and commodity flows associated with the increase in commutation to the city for work, the production base of the local economy is witnessing far-reaching changes. The cropping pattern has been diversified to allow for extension of mixed farming. While the production of grains and pulses continues to decrease in area but increase yields. Thanks to technological innovation, there has also been substantial increase in the output of milk, fruits, vegetables and poultry. Non-agricultural occupations too have helped to bring in prosperity to these villages; they include quarrying, brick kilns, a variety of handicrafts and small scale ancillary processing units.

But it is also notable that the rural scene is conspicuously blotted by farm houses especially of the *nouveau riches* from the metropolis; primarily, these farm houses serve as week-end *rendezvous* for the metropolitan affluence that bring in influence dubious in nature. These metropolitan intrusions and the increasing contacts of the rural folk with the city tend to create tempting opportunities far many socially undesirable avocations, including such pursuits as the clandestine home brewing of alcohol and boo legging of varied sorts.

The social fabric of his rural population is falling apart. The spread of education and technical training, of primary health care and family planning services,

of ICDS and social welfare, and of a host of beneficiary-oriented development programmes may be said to constitute positive elements in this rapid social change but they are in fact overwhelmed by several other more dubious intrusions wrecking community structures.

Urban vices are spreading so rapidly that it is difficult to counter them effectively by the official dispensation of social education, however well-conceived and good-intentioned it may be. These village communities are cracking at their rims. They face mounting social tensions and conflicts of intruding political interests. Indeed, the robust common sense and simplicity of these rural folk are giving way to new styles of life and habits of food, drinking and dressing patterns on urban sophistication. Their incomes have increased but wasteful spending has increased even more. Not knowing how to productively use their increased incomes, they fall in easy prey to the sharks from the city. The inherited equanimity of life in these rural communities has vanished almost completely. Their traditions, customs and culture are grievously threatened. It would not be a great tragedy if they become extinct but there is nothing new and positive to take their place.

The proselytisation of rural rusticity into urban sophistication can not take place so suddenly without pain and sacrifice. That the urban encroachment upon this rural territory is all too sudden is quite evident. It is perhaps inescapable. It is equally unavoidable that these rural communities are being revamped away by the tide of a patently half-baked metropolitan culture. The resulting trauma is undoubtedly painful but no one knows how to ease this trauma and facilitate the systematic absorption of rural Delhi into the mainstream of the metropolitan life. The hope lies in the imagination and the spirit of innovation that the Delhi Metropolitan Corporation displays in dealing with the problems of the rural communities within its jurisdiction. A lot more work needs to be undertaken, than hitherto, to save these people from the same fate as of these in the so-called 'urbanised villages' encircled by the metropolis. We need not cherish rural living for its own sake but in the process of its transformation into the urban there should be an assurance that the end result is not the compounding of both urban and rural ills. The rural community preserved its identity many a time in Delhi's long and turbulent history. Today it may not retain that identity in the face of the onrush of the mammoth metropolis stridently marching into the 21st century.

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March, 1987

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INDEX

A

B

C

D

E

F

G

H

I

J

K

Q

R

S

T

U

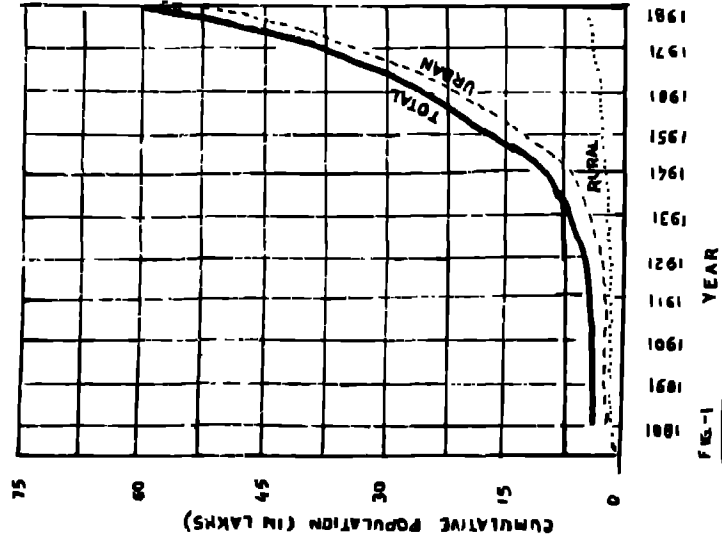
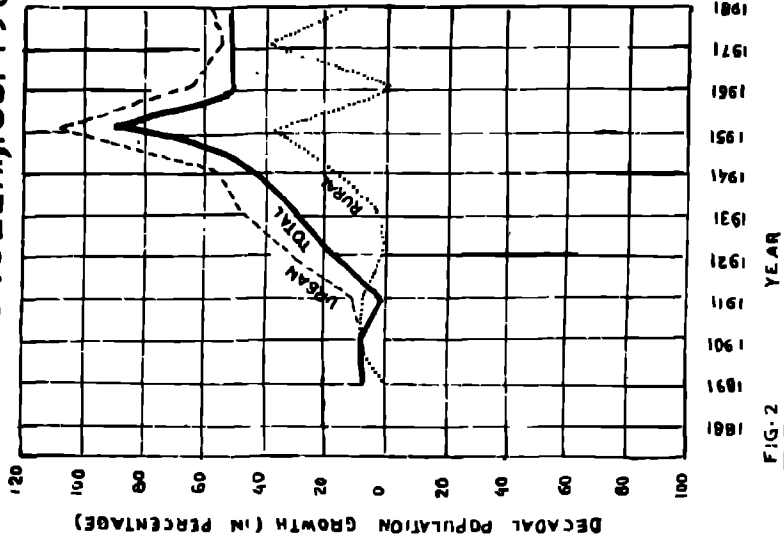
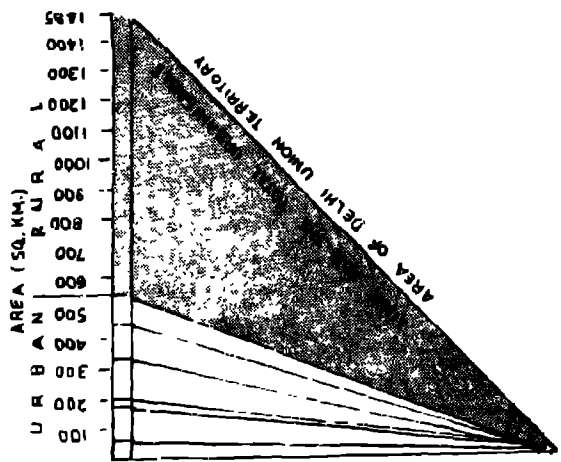
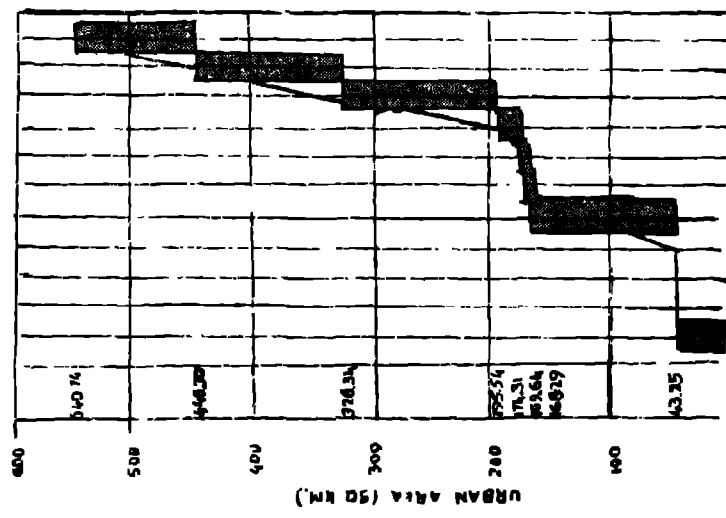
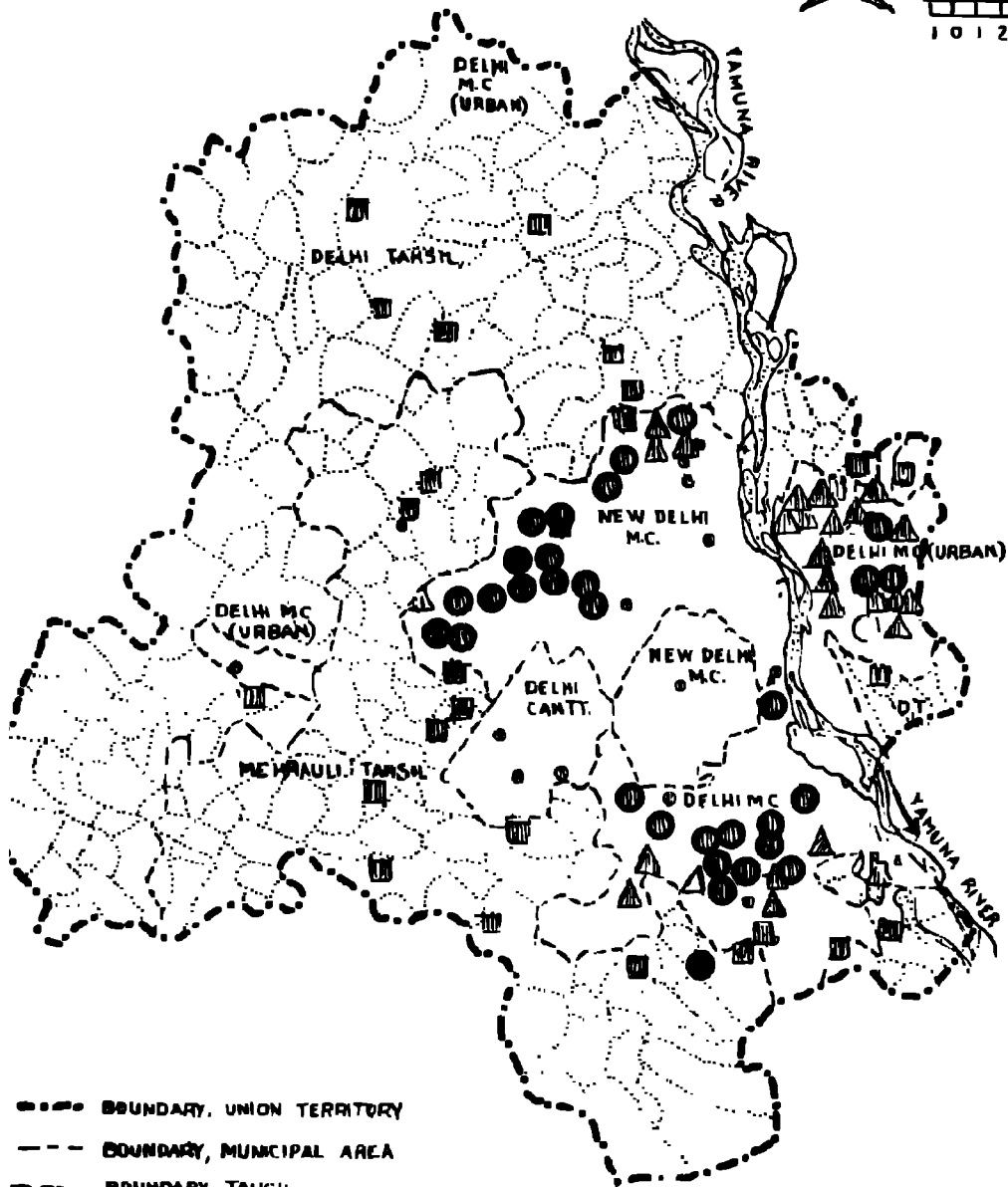
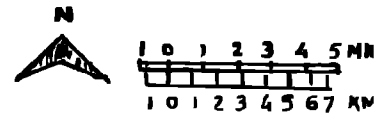
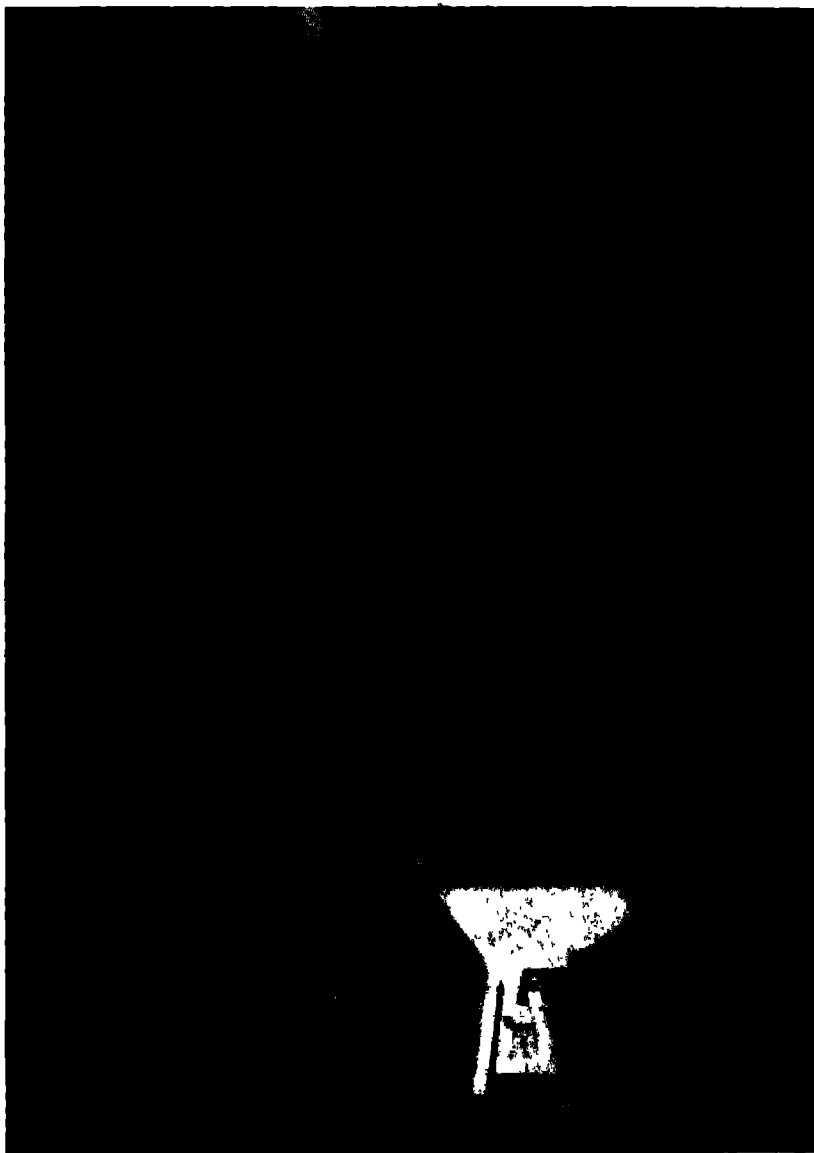
V

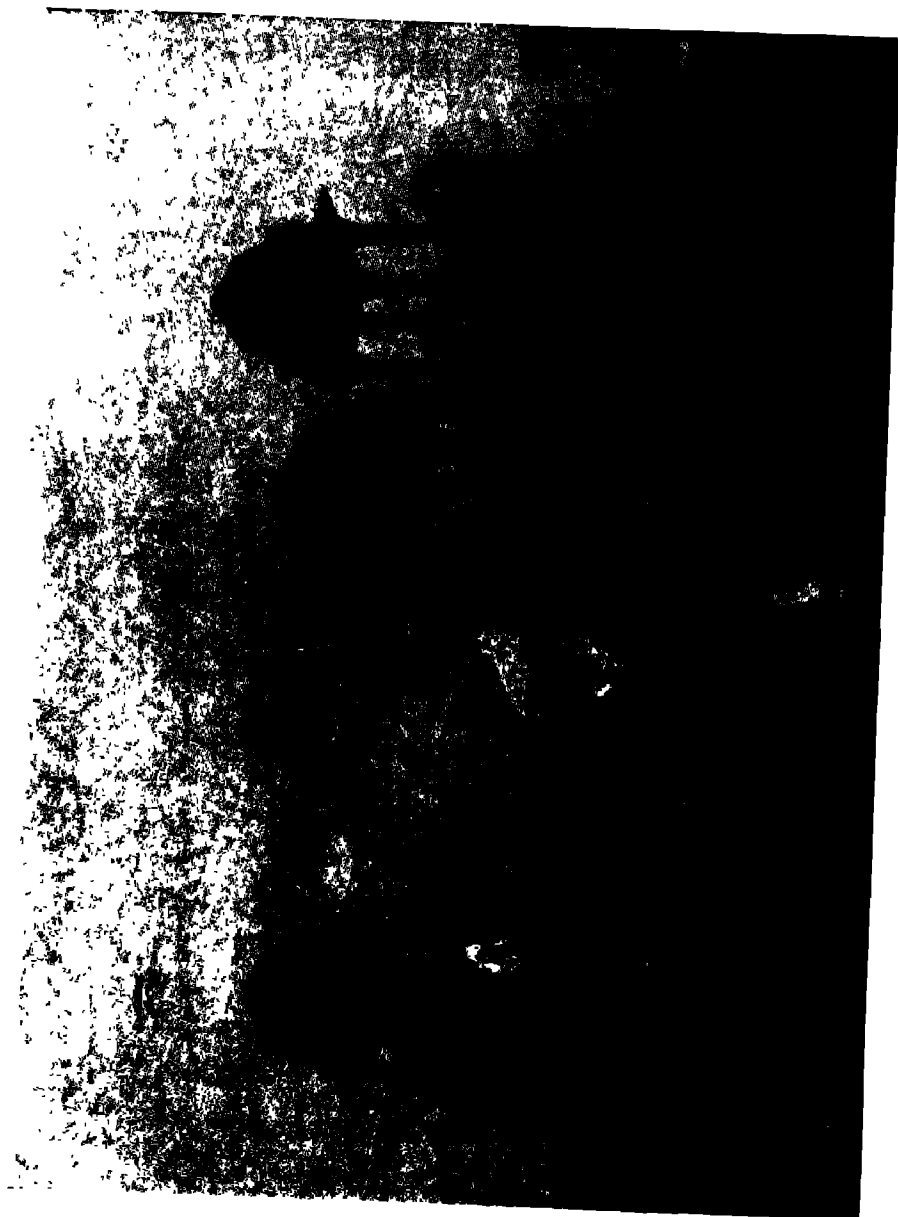
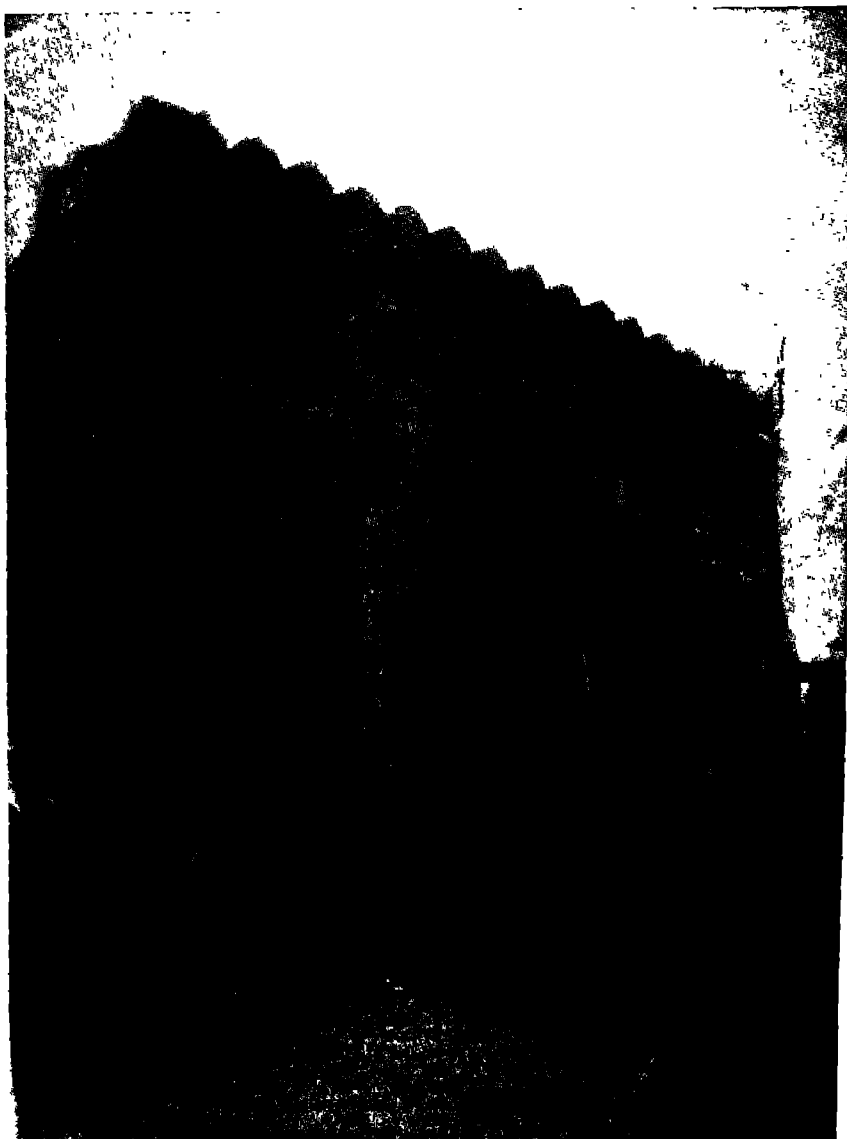
W

Y

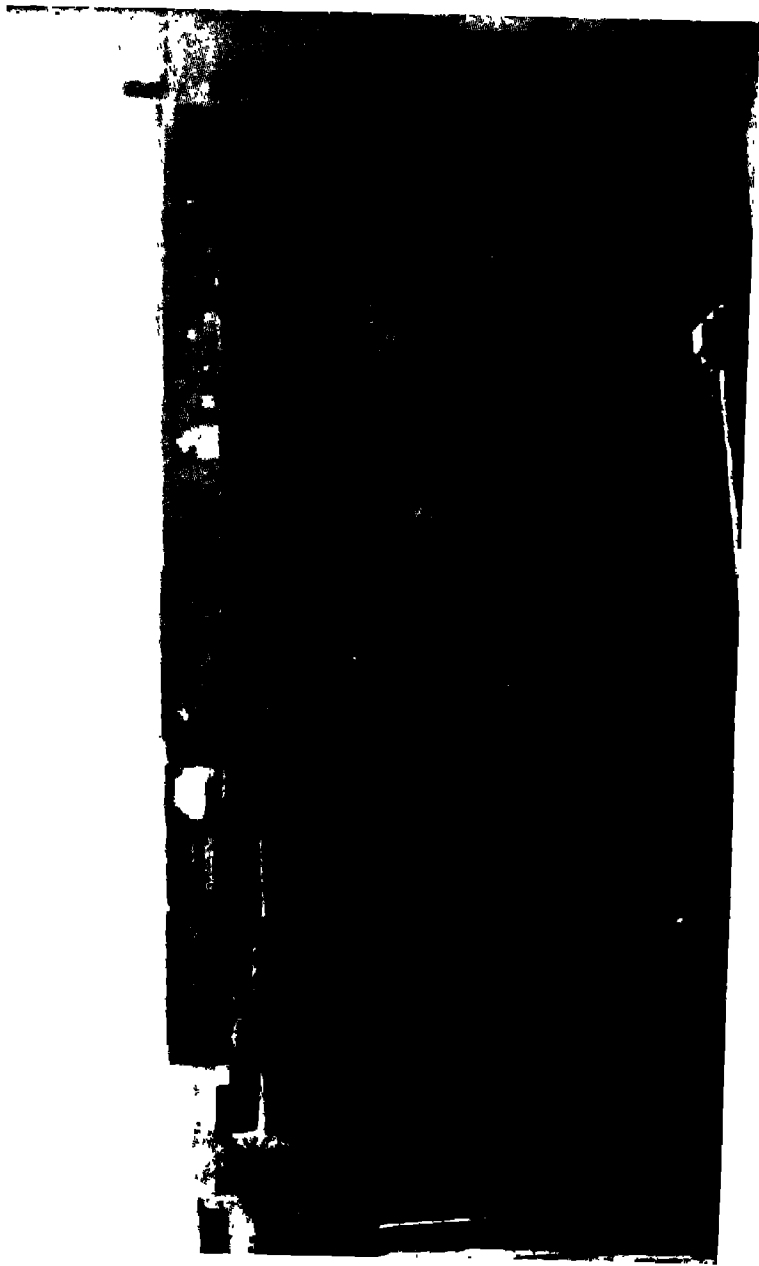
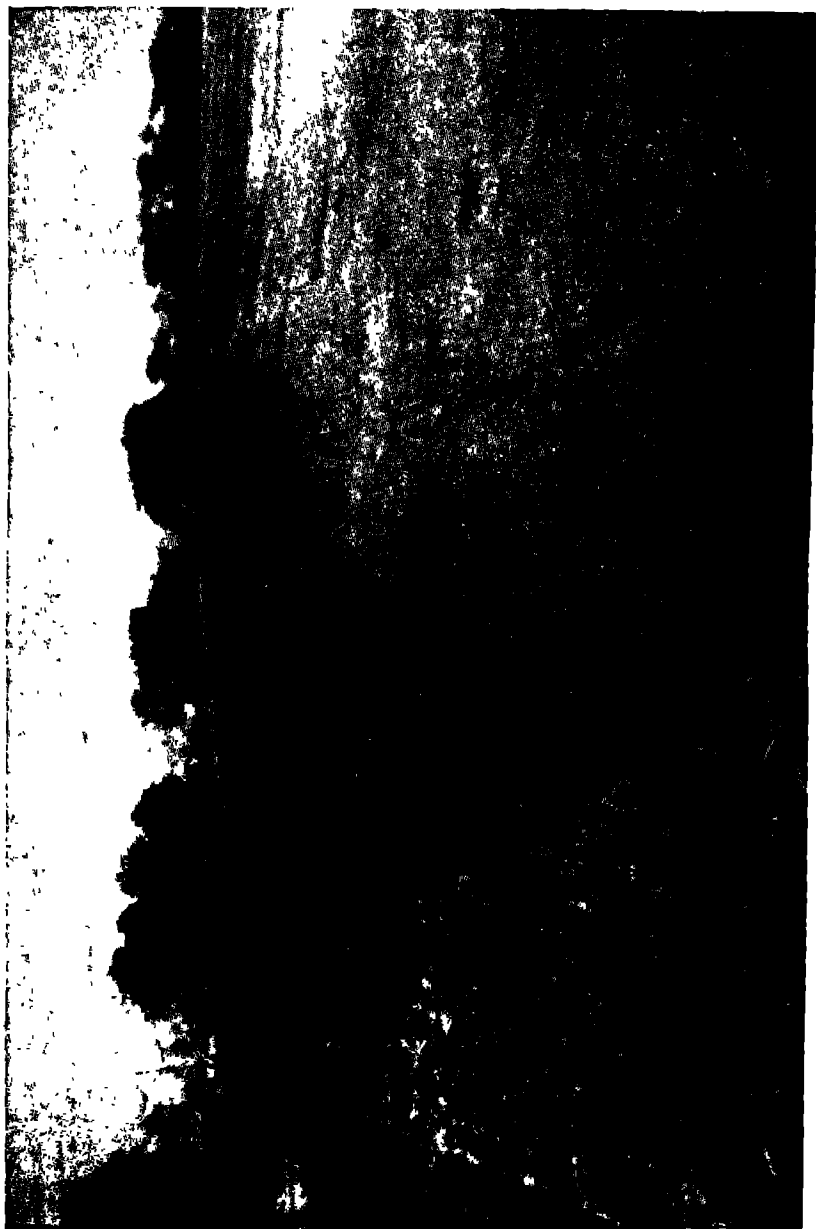
Z

LIST OF ILLUSTRATIONS

POPULATION OF DELHI, 1881-1981
CUMULATIVE POPULATION (IN LAKHS)
75
60
45
30
15
0
TOTAL
URBAN
RURAL
1881
1891
1901
1911
1921
1931
1941
1951
1961
1971
1981
FIG-1
YEAR
PERCENTAGE DECADAL GROWTH OF POPULATION DELHI, 1881-1981
DECADAL POPULATION GROWTH (IN PERCENTAGE)
120
100
80
60
40
20
0
20
40
60
80
100
URBAN
TOTAL
RURAL
1881
1891
1901
1911
1921
1931
1941
1951
1961
1971
1981
FIG-2
YEAR

PL. 1.1, 2

DELH
N
1 0 1 2 3 4 5 MN
1 0 1 2 3 4 5 6 7 KM
YAMUNA RIVER
DELHI M.C (URBAN)
DELHI TAHSIL
NEW DELHI M.C.
DELHI MC (URBAN)
DELHI MC (URBAN)
DELHI CANTT.
NEW DELHI M.C.
D.T.
MEHRAULI TAHSIL
DELHI MC
YAMUNA RIVER
BOUNDARY, UNION TERRITORY
BOUNDARY, MUNICIPAL AREA
BOUNDARY, TAHSIL
BOUNDARY, VILLAGE
RIVER
D.T. DELHI TAHSIL
M.T. MEHRAULI TAHSIL
VILLAGES URBANISED IN DIFFERENT DECADES
PRIOR TO 1951
1951-61
1961-71
1971-81

PL. 5 Kalu Sarai Masjid

PL. 6 Adam Khan's Tomb

PL. 7 Jahaz Mahal

PL. I: Badarpur Gate

PL. 9 Hastsal Minar

PL. 10 Shalimar Bagh

PL. 11 Mahipalpur

Pl. 12 Mahipalpur Bund

PL. 13 Coronation Pillar